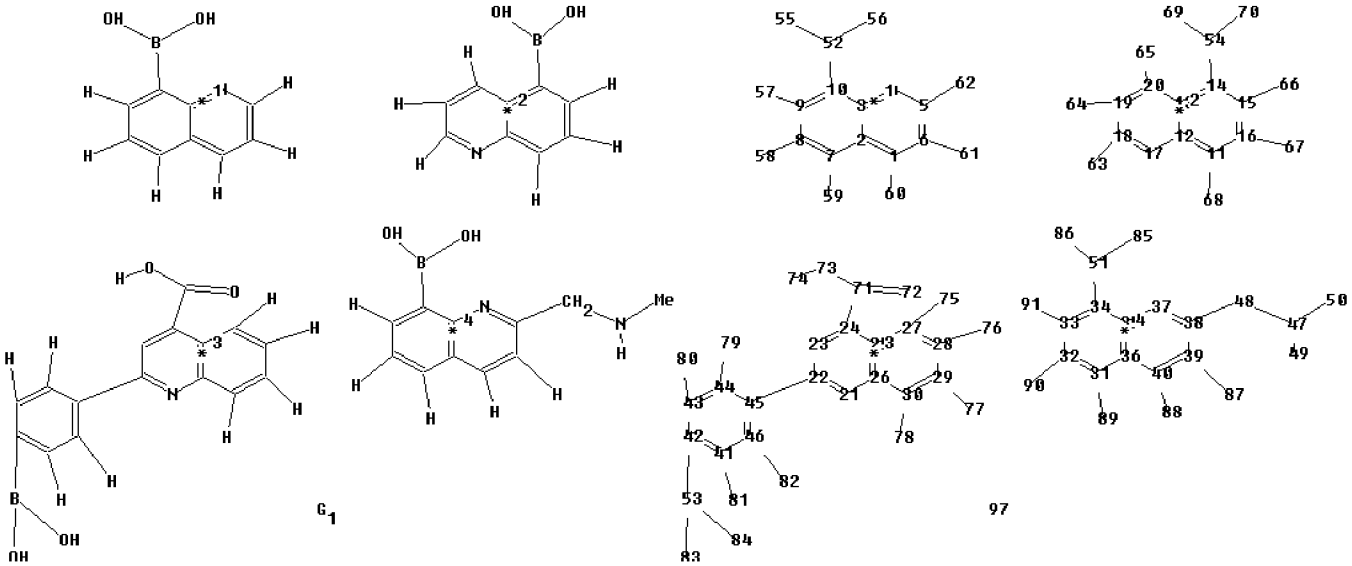
```
=> file registry
FILE 'REGISTRY' ENTERED AT 15:46:02 ON 31 MAR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   29 MAR 2009  HIGHEST RN 1129300-01-1
DICTIONARY FILE UPDATES:  29 MAR 2009  HIGHEST RN 1129300-01-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

Uploading L1.str
```




```
chain nodes :
47  48  49  50  51  52  53  54  55  56  57  58  59  60  61  62  63  64  65  66  67
68  69  70  71  72  73  74  75  76  77  78  79  80  81  82  83  84  85  86  87  88
89  90  91
97
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23
24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44
45  46
chain bonds :
1-60  5-62  6-61  7-59  8-58  9-57  10-52  11-68  14-54  15-66  16-67  18-63  19-64
```

```
20-65  22-45  24-71  27-75  28-76  29-77  30-78  31-89  32-90  33-91  34-51  38-48
39-87  40-88
41-81  42-53  43-80  44-79  46-82  47-48  47-49  47-50  51-85  51-86  52-55  52-56
53-83  53-84
54-69  54-70  71-72  71-73  73-74
ring bonds :
1-2  1-6  2-3  2-7  3-4  3-10  4-5  5-6  7-8  8-9  9-10  11-12  11-16  12-13  12-17
13-14  13-20  14-15  15-16  17-18  18-19  19-20  21-22  21-26  22-23  23-24  24-25
25-26  25-27
26-30  27-28  28-29  29-30  31-32  31-36  32-33  33-34  34-35  35-36  35-37  36-40
37-38  38-39
39-40  41-42  41-46  42-43  43-44  44-45  45-46
exact bonds :
1-60  5-62  6-61  7-59  8-58  9-57  10-52  11-68  14-54  15-66  16-67  18-63  19-64
20-65  22-45  24-71  27-75  28-76  29-77  30-78  31-89  32-90  33-91  34-51  38-48
39-87  40-88
41-81  42-53  43-80  44-79  46-82  47-48  47-49  47-50  51-85  51-86  52-55  52-56
53-83  53-84
54-69  54-70  73-74
normalized bonds :
1-2  1-6  2-3  2-7  3-4  3-10  4-5  5-6  7-8  8-9  9-10  11-12  11-16  12-13  12-17
13-14  13-20  14-15  15-16  17-18  18-19  19-20  21-22  21-26  22-23  23-24  24-25
25-26  25-27
26-30  27-28  28-29  29-30  31-32  31-36  32-33  33-34  34-35  35-36  35-37  36-40
37-38  38-39
39-40  41-42  41-46  42-43  43-44  44-45  45-46  71-72  71-73


G1:[*1],[*2],[*3],[*4]

Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:Atom  13:Atom  14:Atom  15:Atom  16:Atom  17:Atom  18:Atom  19:Atom
20:Atom  21:Atom
22:Atom  23:Atom  24:Atom  25:Atom  26:Atom  27:Atom  28:Atom  29:Atom  30:Atom
31:Atom  32:Atom
33:Atom  34:Atom  35:Atom  36:Atom  37:Atom  38:Atom  39:Atom  40:Atom  41:Atom
42:Atom  43:Atom
44:Atom  45:Atom  46:Atom  47:CLASS  48:CLASS  49:CLASS  50:CLASS  51:CLASS
52:CLASS  53:CLASS  54:CLASS
55:CLASS  56:CLASS  57:CLASS  58:CLASS  59:CLASS  60:CLASS  61:CLASS  62:CLASS
63:CLASS  64:CLASS
65:CLASS  66:CLASS  67:CLASS  68:CLASS  69:CLASS  70:CLASS  71:CLASS  72:CLASS
73:CLASS
74:CLASS  75:CLASS  76:CLASS  77:CLASS  78:CLASS  79:CLASS  80:CLASS  81:CLASS
82:CLASS  83:CLASS
84:CLASS  85:CLASS  86:CLASS  87:CLASS  88:CLASS  89:CLASS  90:CLASS  91:CLASS
97:CLASS




=> file zcaplus
FILE 'ZCAPLUS' ENTERED AT 15:46:06 ON 31 MAR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
```

FILE COVERS 1907 - 31 Mar 2009 VOL 150 ISS 14
FILE LAST UPDATED: 30 Mar 2009 (20090330/ED)

ZCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCAPLUS' FILE

```
=> d stat que L47
L35       18168 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  WANG B?/AU
L36        8823 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  GAO X?/AU
L37       14705 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  YANG W?/AU
L38        3780 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  FANG H?/AU
L39        7303 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  YAN Y?/AU
L40         273 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L35 AND (L36 OR L37
                OR L38 OR L39)
L41          65 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L36 AND (L37 OR L38
                OR L39)
L42          36 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L37 AND (L38 OR L39)
L43          11 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L38 AND L39
L44          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L40 AND (L41 OR L42
                OR L43)
L45           1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L41 AND (L42 OR L43)
L46           0 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L42 AND L43
L47          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  (L44 OR L45 OR L46)


=> d stat que L48
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L6              5 SEA FILE=REGISTRY SSS FUL L1
L7            143 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L6
L35       18168 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  WANG B?/AU
L36        8823 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  GAO X?/AU
L37       14705 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  YANG W?/AU
L38        3780 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  FANG H?/AU
L39        7303 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  YAN Y?/AU
L48           8 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L7 AND (L35 OR L36 OR
                L37 OR L38 OR L39)


=> s L47 or L48
```

```
L51         22 L47 OR L48

=> file medline embase biosis wpix
FILE 'MEDLINE' ENTERED AT 15:46:48 ON 31 MAR 2009

FILE 'EMBASE' ENTERED AT 15:46:48 ON 31 MAR 2009
Copyright (c) 2009 Elsevier B.V. All rights reserved.

FILE 'BIOSIS' ENTERED AT 15:46:48 ON 31 MAR 2009
Copyright (c) 2009 The Thomson Corporation

FILE 'WPIX' ENTERED AT 15:46:48 ON 31 MAR 2009
COPYRIGHT (C) 2009 THOMSON REUTERS

=> d stat que L50
L35       18168 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  WANG B?/AU
L36        8823 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  GAO X?/AU
L37       14705 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  YANG W?/AU
L38        3780 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  FANG H?/AU
L39        7303 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  YAN Y?/AU
L40         273 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L35 AND (L36 OR L37
                OR L38 OR L39)
L41          65 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L36 AND (L37 OR L38
                OR L39)
L42          36 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L37 AND (L38 OR L39)
L43          11 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L38 AND L39
L44          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L40 AND (L41 OR L42
                OR L43)
L45           1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L41 AND (L42 OR L43)
L46           0 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L42 AND L43
L47          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  (L44 OR L45 OR L46)
L50          19 SEA L47


=> dup rem L51 L50
FILE 'ZCAPLUS' ENTERED AT 15:47:14 ON 31 MAR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'MEDLINE' ENTERED AT 15:47:14 ON 31 MAR 2009

FILE 'EMBASE' ENTERED AT 15:47:14 ON 31 MAR 2009
Copyright (c) 2009 Elsevier B.V. All rights reserved.

FILE 'BIOSIS' ENTERED AT 15:47:14 ON 31 MAR 2009
Copyright (c) 2009 The Thomson Corporation

FILE 'WPIX' ENTERED AT 15:47:14 ON 31 MAR 2009
COPYRIGHT (C) 2009 THOMSON REUTERS
PROCESSING COMPLETED FOR L51
PROCESSING COMPLETED FOR L50
L52          24 DUP REM L51 L50 (17 DUPLICATES REMOVED)
                ANSWERS '1-22' FROM FILE ZCAPLUS
                ANSWERS '23-24' FROM FILE BIOSIS

=> d ibib abs hitstr L52 1-22; d iall L52 23-24

L52  ANSWER 1 OF 24  ZCAPLUS  COPYRIGHT 2009 ACS on STN DUPLICATE 1
ACCESSION NUMBER:        2006:180182  ZCAPLUS  Full-text
```

DOCUMENT NUMBER: 144:407472
TITLE: Substituent effect on anthracene-based bisboronic acid glucose sensors
AUTHOR(S): Kaur, Gurpreet; Fang, Nao; Gao, Xingming; Li, Haibo; Wang, Binghe
CORPORATE SOURCE: Department of Chemistry and Center for Biotechnology and Drug Design, Georgia State University, Atlanta, GA, 30302-4098, USA
SOURCE: Tetrahedron (2006), 62(11), 2583-2589
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:407472

AB Earlier the authors communicated an anthracene-based bisboronic acid sensor for glucose. Aimed at understanding the substituent effect, the authors have introduced various functional groups, such as the cyano, nitro, and fluoro group on the boronic acid moiety of this glucose sensor. Fluorescent binding studies indicated that the cyano-substituted sensor has the highest affinity (K 2540 M-1) for glucose, but the lowest selectivity (three-fold over fructose); the fluoro-substituted compound shows the lowest affinity (630 M-1) and a modest selectivity (15-fold over fructose); and the unsubstituted one shows the highest selectivity over fructose (43-fold) and a modest affinity (1472 M-1).

REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 2 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2005:239227 ZCAPLUS Full-text
DOCUMENT NUMBER: 142:308776
TITLE: Water soluble boronic acid fluorescent reporter compounds and methods of use thereof
INVENTOR(S): Wang, Binghe; Gao, Xingming; Yang, Wenqian; Fang, Nao; Yan, Jun
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 80 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

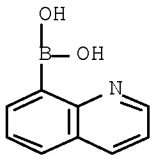
PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2005024416	A1	20050317	WO 2004-US28838		20040907
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
US 20070274922	A1	20071129	US 2007-570807		20070531
PRIORITY APPLN. INFO.:			US 2003-500785P	P	20030905
			WO 2004-US28838	W	20040907

OTHER SOURCE(S): MARPAT 142:308776

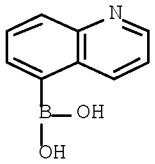
AB Described herein are boronic acid fluorescent compds. and methods of use thereof.

IT 86-58-8, 8-Quinolineboronic acid 355386-94-6, 5-Quinolinylboronic acid 373384-17-9, 2-(4-Boronophenyl)-4-quinolinecarboxylic acid
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

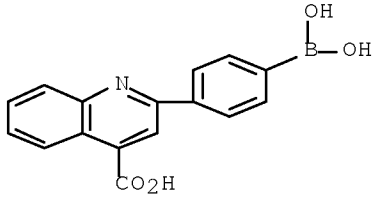
RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



RN 355386-94-6 ZCAPLUS
CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)

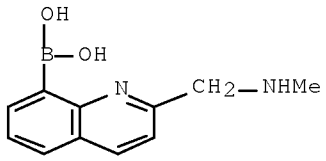


RN 373384-17-9 ZCAPLUS
CN 4-Quinolinecarboxylic acid, 2-(4-boronophenyl)- (9CI) (CA INDEX NAME)



IT 847862-01-5P
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

RN 847862-01-5 ZCAPLUS
CN Boronic acid, B-[2-[(methylamino)methyl]-8-quinolinyl]- (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 3 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2004:324501 ZCAPLUS Full-text
DOCUMENT NUMBER: 142:130006
TITLE: The First Fluorescent Diboronic Acid Sensor Specific for Hepatocellular Carcinoma Cells Expressing Sialyl Lewis X
AUTHOR(S): Yang, Wenqian; Fan, Haiying; Gao, Xingming; Gao, Shouhai; Karnati, Vishnu Vardhan Reddy; Ni, Weijuan; Hooks, W. Borden; Carson, John; Weston, Brent; Wang, Binghe
CORPORATE SOURCE: Department of Chemistry, Georgia State University, Atlanta, GA, 30303, USA
SOURCE: Chemistry & Biology (2004), 11(4), 439-448
CODEN: CBOLE2; ISSN: 1074-5521
PUBLISHER: Cell Press
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:130006
AB Carbohydrate antigens with subterminal fucosylation have been implicated in the development and progression of several cancers, including hepatocellular carcinoma (HCC). Fluorescent sensors targeting fucosylated carbohydrate antigens could potentially be used for diagnostic and other applications. The authors have designed and synthesized a series of 26 diboronic acid compds. as potential fluorescent sensors for such carbohydrates. Among these compds., 7q was able to fluorescently label cells expressing high levels of sLex (HEPG2) within a concentration range of 0.5 to 10 μM. This compound (7q) did not label cells expressing Lewis Y (HEP3B), nor cells without fucosylated antigens (COS7). This represents the first example of a fluorescent compound labeling cells based on cell surface carbohydrate structures.
REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 4 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2003:177702 ZCAPLUS Full-text
DOCUMENT NUMBER: 139:16782
TITLE: The first fluorescent sensor for D-glucarate based on the cooperative action of boronic acid and guanidinium groups
AUTHOR(S): Yang, Wenqian; Yan, Jun; Fang, Hao; Wang, Binghe
CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2003), (6), 792-793
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new fluorescent sensor with a recognition unit consisting of a boronic acid moiety and a guanidinium unit shows selective binding of D-glucarate in aqueous solution

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 5 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 5

ACCESSION NUMBER: 2003:341171 ZCAPLUS Full-text

DOCUMENT NUMBER: 139:316357

TITLE: Boronic acid compounds as potential pharmaceutical agents

AUTHOR(S): Yang, Wenqian; Gao, Xingming; Wang, Binghe

CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA

SOURCE: Medicinal Research Reviews (2003), 23(3), 346-368
CODEN: MRREDD; ISSN: 0198-6325

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. Boronic acid compds. have been used, because of their unique structural features, for the development of potent enzyme inhibitors, boron neutron capture agents for cancer therapy, and as antibody mimics that recognize biol. important saccharides. Consequently, there has been a surge of interests in boronic acid compds. This study reviews the recent development in this area during the last six years.

REFERENCE COUNT: 122 THERE ARE 122 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 6 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 6

ACCESSION NUMBER: 2002:640931 ZCAPLUS Full-text

DOCUMENT NUMBER: 138:136693

TITLE: Catechol pendant polystyrene for solid-phase synthesis

AUTHOR(S): Yang, Wenqian; Gao, Xingming; Springsteen, Greg; Wang, Binghe

CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA

SOURCE: Tetrahedron Letters (2002), 43(36), 6339-6342
CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:136693

AB A catechol-pendant polystyrene was prepared from the Merrifield resin via a convenient procedure with high-d. loading. Due to the high affinity binding between catechol and boronic acid, the polymer resin readily captures boronic acid compds. The feasibility of using immobilized catechol to capture boronic acid products for purification and solid-phase transformation was demonstrated. Moreover, the immobilized catechol was also used for the preparation of resin-bound catecholborane, which can be used as a solid-phase amidation reagent.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 7 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 7

ACCESSION NUMBER: 2002:846231 ZCAPLUS Full-text

DOCUMENT NUMBER: 138:267844

TITLE: A glucose-selective fluorescence sensor based on boronic acid-diol recognition

AUTHOR(S): Karnati, Vishnu Vardhan; Gao, Xingming; Gao,

Shouhai; Yang, Wenqian; Ni, Weijuan; Sankar, Sabapathy; Wang, Binghe
CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SOURCE: Bioorganic & Medicinal Chemistry Letters (2002), 12(23), 3373-3377
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A glucose selective diphenylboronic acid fluorescent sensor (10a) with a Ka of 1472 M-1 has been synthesized and evaluated. This sensor shows a 43- and 49-fold selectivity for glucose over fructose and galactose, resp. The binding affinity improvement is about 300-fold and the selectivity improvement for glucose over fructose is about 1400-fold compared with the monoboronic acid compound, phenylboronic acid. 1H NMR studies indicate that sensor 10a binds with α-d-glucofuranose in a bidentate manner (1:1 ratio).
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 8 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 8
ACCESSION NUMBER: 2002:543670 ZCAPLUS Full-text
DOCUMENT NUMBER: 137:306853
TITLE: Diboronic acids as fluorescent probes for cells expressing sialyl lewis X
AUTHOR(S): Yang, Wenqian; Gao, Shouhai; Gao, Xingming; Karnati, Vishnu Vardhan Reddy; Ni, Weijuan; Wang, Binghe; Hooks, W. Borden; Carson, John; Weston, Brent
CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SOURCE: Bioorganic & Medicinal Chemistry Letters (2002), 12(16), 2175-2177
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A series of fluorescent diboronic acids was synthesized in nine steps as potential sensors for sialyl Lewis X (sLex). The fluorescent binding studies of these sensors with sLex were carried out in a mixed aqueous solution Compound 7e was found to show the strongest fluorescence enhancement upon binding with sLex. Using cell cultures, 7e was shown to label sLex-expressing HEPG2 cells at 1 μM, while non-sLex-expressing cells were not labeled.
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 9 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:277789 ZCAPLUS Full-text
DOCUMENT NUMBER: 150:292251
TITLE: ARGO-YBJ constraints on very high energy emission from GRBs
AUTHOR(S): Aielli, G.; Bacci, C.; Bartoli, B.; Bernardini, P.; Bi, X. J.; Bleve, C.; Branchini, P.; Budano, A.; Bussino, S.; Calabrese Melcarne, A. K.; Camarri, P.; Cao, Z.; Cappa, A.; Cardarelli, R.; Catalanotti, S.; Cattaneo, C.; Cavaliere, S.; Celio, P.; Chen, S. Z.; Chen, Y.; Cheng, N.; Creti, P.; Cui, S. W.; Cusumano, G.; Dai, B. Z.; D'Ali Staiti, G.; Danzengluobu; Dattoli, M.; De Mitri, I.; D'Ettorre Piazzoli, B.; De Vincenzi, M.; Di Girolamo, T.; Ding, X. H.; Di Sciascio, G.; Feng, C. F.; Feng, Zhaoyang; Feng,

Zhenyong; Ferrigno, C.; Galeazzi, F.; Galeotti, P.; Gao, X. Y.; Gargana, R.; Gou, Q. B.; Guo, Y. Q.; He, H. H.; Hu, Haibing; Hu, Hongbo; Huang, Q.; Iacovacci, M.; Iuppa, R.; James, I.; Jia, H. Y.; Labaciren; Li, H. J.; Li, J. Y.; Li, X. X.; Li, Y. R.; Liberti, B.; Liguori, G.; Liu, C.; Liu, C. Q.; Liu, M. Y.; Liu, J.; Lu, H.; Ma, X. H.; Mancarella, G.; Mari, S. M.; Marsella, G.; Martello, D.; Mastroianni, S.; Meng, X. R.; Mu, J.; Nicastro, L.; Ning, C. C.; Palummo, L.; Panareo, M.; Perrone, L.; Pistilli, P.; Qu, X. B.; Rossi, E.; Ruggieri, F.; Saggese, L.; Salvini, P.; Santonico, R.; Segreto, A.; Shen, P. R.; Sheng, X. D.; Shi, F.; Stanescu, C.; Surdo, A.; Tan, Y. H.; Vallania, P.; Vernetto, S.; Vigorito, C.; Wang, B.; Wang, H.; Wang, Y. G.; Wu, C. Y.; Wu, H. R.; Xu, B.; Xue, L.; Yan, Y. X.; Yang, H. T.; Yang, Q. Y.; Yang, X. C.; Yu, G. C.; Yuan, A. F.; Zha, M.; Zhang, H. M.; Zhang, J. L.; Zhang, L.; Zhang, P.; Zhang, X. Y.; Zhang, Y.; Zhaxisangzhu; Zhou, X. X.; Zhu, F. R.; Zhu, Q. Q.; Zizzi, G.

CORPORATE SOURCE: Dipartimento di Fisica, Universita "Tor Vergata", Rome, 00133, Italy

SOURCE: arXiv.org, e-Print Archive, Astrophysics (2009) 1-13, arXiv:0903.0119v1 [astro-ph.HE], 1 Mar 2009
CODEN: AARSC7
URL: http://arxiv.org/PS_cache/arxiv/pdf/0903/0903.0119v1.pdf

PUBLISHER: Cornell University Library

DOCUMENT TYPE: Preprint

LANGUAGE: English

AB The ARGO-YBJ experiment is designed for very high energy γ-astronomy and cosmic ray researches. With a large sensitive area fully covered with resistive plate chambers at a very high altitude (4300 m a.s.l.), the ARGO-YBJ detector is used to search for transient phenomena, such as γ-ray bursts (GRB). Because the ARGO-YBJ detector has a large field of view (FOV .apprx. 2 sr) and is operated in a full duty cycle (>90%), it is one of the best ground-based GRB surveying apparatuses. Working at a relatively high energy threshold around few hundred GeV, the ARGO-YBJ detector is operated in searches for high energy GRBs following alarms set by satellite borne observations at lower energies. A sensitivity of the ARGO-YBJ detector for GRB detection is estimated Upper limits of fluence with 99% confidence level of 31 GRBs inside the FOV from June 2006 to Jan. 2009 are set in two energy ranges of 10 GeV-100 GeV and 10 GeV-1 TeV.

L52 ANSWER 10 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2009:264669 ZCAPLUS Full-text

TITLE: Compositions for regulating or modulating quorum sensing in bacteria, methods of using the compounds, and methods of regulating or modulating quorum sensing in bacteria

INVENTOR(S): Wang, Binghe; Ni, Nanting; Wang, Junfeng; Lu, Chung-Dar; Chou, Han-Ting; Li, Minyong; Zheng, Shilong; Cheng, Yunfeng; Peng, Hanjing

PATENT ASSIGNEE(S): Georgia State University Research Foundation, Inc., USA

SOURCE: PCT Int. Appl., 75pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2009029317	A2	20090305	WO 2008-US66028	20080606

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

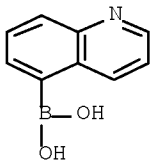
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2007-933735P P 20070608

AB The present disclosure encompasses compds. and compns. that are useful as specific AI-2 antagonists for the control of bacterial quorum sensing. Although the AI-2 antagonists according to the present disclosure may not have bactericidal effect, their ability to attenuate virulence, drug resistance, and/or biofilm formation have therapeutic benefits. In addition, the AI-2 antagonists of the present disclosure can also be used as tools to probe bacterial AI-2 functions. The present disclosure also encompasses methods for inhibiting or attenuating microbial virulence, biofilm formation, and drug resistance. The methods are suitable for preventing bacteria from accruing and forming extensive biofilms that may be a health or hygiene hazard or a phys. issue, such as in the blockage of water or fuel lines.

IT 355386-94-6
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(compns. for regulating or modulating quorum sensing in bacteria)

RN 355386-94-6 ZCAPLUS
CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)



L52 ANSWER 11 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:87071 ZCAPLUS Full-text
DOCUMENT NUMBER: 150:163129
TITLE: Nucleotides and aptamers containing boronic acid groups having biased binding to glycosylated proteins, and uses for glycoprotein detection
INVENTOR(S): Wang, Binghe; Li, Minyong
PATENT ASSIGNEE(S): Georgia State University Research Foundation, Inc., USA
SOURCE: PCT Int. Appl., 94pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2009012363	A2	20090122	WO 2008-US70288	20080717

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

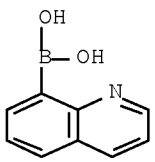
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2007-950681P P 20070719
OTHER SOURCE(S): MARPAT 150:163129

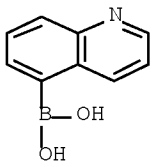
AB The present disclosure encompasses oligonucleotide aptamers selectively binding a target glycosylated polypeptide or protein, and having biased affinity for the glycan through a boronic acid linked to a nucleosidic base of a nucleotide(s). The disclosure further encompasses methods for isolating an aptamer(s) selectively binding a target glycosylated polypeptide, where, from a population of randomized oligonucleotides that have at least one nucleotide having a boronic acid label linked to a base, is selected a first subpopulation of aptamers binding to the target glycosylated polypeptide or protein. This subpopulation is then amplified without using boronic acid-modified TTP, and amplification products not binding to a target glycosylated polypeptide or protein are selected. The second subpopulation of aptamers is then amplified using boronic acid-modified TTP to provide a population of boronic acid-modified aptamers capable of selectively binding to a glycosylation site of a target polypeptide or protein. Other aspects of the disclosure encompass methods for the use of the modified aptamers to detect glycosylated species of a polypeptide or protein.

IT 86-58-8 355386-94-6
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (fluorescent boronic acid compound; nucleotides and aptamers containing boronic acid groups having biased binding to glycosylated proteins, and uses for glycoprotein detection)

RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



RN 355386-94-6 ZCAPLUS
CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)



L52 ANSWER 12 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:1401248 ZCAPLUS Full-text
TITLE: Analysis of polycyclic aromatic hydrocarbons in environmental air
AUTHOR(S): Nie, Jian-Qun; Wang, Bao-Xing; Yang, Wei-Zu; Yan, Yang; Ying, Hou; Chen, Guo-Hui; Xu, Wang
CORPORATE SOURCE: Yunnan Reascend Tobacco Technology (Group) Co., Ltd., Kunming, 650106, Peop. Rep. China
SOURCE: Yancao Keji (2008), (10), 25-29
CODEN: YKAEA8; ISSN: 1002-0861
PUBLISHER: Zhongguo Yancao Keji Xinxi Zhongxin
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB In order to investigate the concentration and constitution of polycyclic aromatic hydrocarbons (PAHs) in environmental air, the sampling method for 16 PAHs in air was optimized, and the PAHs in the air sampled from 5 representative public places (including panel testing room, teahouse, restaurant, cross-roads and Karaoke compartment) in Kunming with the method were analyzed by GC/MS under selected ion monitoring (SIM) mode. The results showed that: 1) it was preferable to collect PAHs in air with silica gel adsorbent for 120 min at the air flow rate of 1.0 L/min; 2) except for those from panel testing room, dibenzo[a,h]anthrene was not detectable in all samples; 3) the places in the order of total content of PAHs in air were panel testing room > teahouse > restaurant > crossroads > Karaoke compartment; 4) except for teahouse, the constitution and distribution of PAHs in environmental air in all tested places were similar, while the concentration of each PAH was different; 5) the contents of acenaphthene, fluoranthene and pyrene in the air of teahouse were obviously higher than those in the other 4 places.

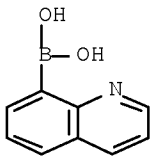
L52 ANSWER 13 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:863170 ZCAPLUS Full-text
DOCUMENT NUMBER: 147:469384
TITLE: A unique quinolineboronic acid-based supramolecular structure that relies on double intermolecular B-N bonds for self-assembly in solid state and in solution. [Erratum to document cited in CA146:501102]
AUTHOR(S): Zhang, Yanling; Li, Minyong; Chandrasekaran, Sekar; Gao, Xingming; Fang, Xikui; Lee, Hsiau-Wei; Hardcastle, Kenneth; Yang, Jenny; Wang, Binghe
CORPORATE SOURCE: Department of Chemistry and Center for Biotechnology and Drug Design, Georgia State University, Atlanta, GA, 30302-4089, USA
SOURCE: Tetrahedron (2007), 63(37), 9256
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal

LANGUAGE: English

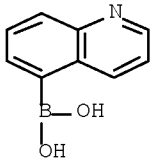
AB The mol. radii presented were not normalized for concentration effect though the radii at different concns. for the internal reference, dioxane, were presented side by side for comparison. Presenting the normalized radii will allow readers to see a more accurate picture of the size effect. Using dioxane, which has a hydrodynamic radius of 2.12Å, as a size reference, the effective hydrodynamic radii for all samples have been normalized. Supplemental Table 2 summarizes the results of mol. radii (Å) for 8-QBA and 5-QBA after internal reference normalization. It is clear that the mol. radius of 8-QBA is 20% greater than that of 5-QBA at all concns. These results are consistent with self-association of 8-QBA into dimer (methanol), however, with no obvious concentration dependence observed

IT 86-58-8, 8-Quinolineboronic acid 355386-94-6, 5-Quinolineboronic acid
RL: PRP (Properties)
(crystal structure; unique quinolineboronic acid-based supramol. structure that relies on double intermol. boron-nitrogen bonds for self-assembly in solid state and in solution (Erratum))

RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



RN 355386-94-6 ZCAPLUS
CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)



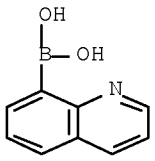
L52 ANSWER 14 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:301956 ZCAPLUS Full-text
DOCUMENT NUMBER: 146:501102
TITLE: A unique quinolineboronic acid-based supramolecular structure that relies on double intermolecular B-N bonds for self-assembly in solid state and in solution
AUTHOR(S): Zhang, Yanling; Li, Minyong; Chandrasekaran, Sekar; Gao, Xingming; Fang, Xikui; Lee, Hsiau-Wei; Hardcastle, Kenneth; Yang, Jenny; Wang, Binghe
CORPORATE SOURCE: Department of Chemistry and Center for Biotechnology and Drug Design, Georgia State University, Atlanta, GA, 30302-4089, USA
SOURCE: Tetrahedron (2007), 63(16), 3287-3292

CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

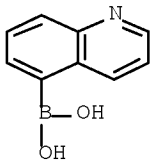
AB The boronic acid functional group plays very important roles in sugar recognition, catalysis, organic synthesis, and supramol. assembly. Therefore, understanding the unique properties of this functional group is very important. 8-Quinolineboronic acid (8-QBA) is capable of self-assembling in solid state through a unique intermol. B-N bond mechanism reinforced by intermol. boronic anhydride formation, π-π stacking, and hydrogen bond formation. NMR NOE and diffusion studies indicate that intermol. B-N interaction also exists in solution with 8-QBA. In contrast, a positional isomer of 8-QBA, 5-quinolineboronic acid (5-QBA) showed very different behaviors in crystal packing and in solution and therefore different supramol. network. Understanding the structural features of this unique 8-QBA assembly could be very helpful for the future design of new sugar sensors, mol. catalysts, and supramol. assemblies.

IT 86-58-8, 8-Quinolineboronic acid 355386-94-6
RL: PRP (Properties)
(crystal structure; unique quinolineboronic acid-based supramol. structure that relies on double intermol. boron-nitrogen bonds for self-assembly in solid state and in solution)

RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



RN 355386-94-6 ZCAPLUS
CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)



REFERENCE COUNT: 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 15 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:1245011 ZCAPLUS Full-text
DOCUMENT NUMBER: 147:449674
TITLE: Design and manufacturing of a composite lattice structure reinforced by continuous carbon fibers
AUTHOR(S): Fan, Hualin; Yang, Wei; Wang, Bin; Yan, Yong; Fu, Qiang; Fang, Daining; Zhuang, Zhuo

CORPORATE SOURCE: Department of Engineering Mechanics, Tsinghua University, Beijing, 100084, Peop. Rep. China
SOURCE: Tsinghua Science and Technology (2006), 11(5), 515-522
CODEN: TSTEF7; ISSN: 1007-0214
PUBLISHER: Tsinghua University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB New techniques have been developed to make materials with a periodic three-dimensional lattice structure. The high stiffness per unit weight and multifunction of such lattice structures make them attractive for use in aeronautic and astronautic structures. In this paper, epoxy-soaked continuous carbon fibers were first introduced to make lattice composite structures, which maximize the specific load carrying capacity. A micromech. anal. of several designs, each corresponding to a different manufacturing route, was carried out, in order to find the optimized lattice structure with maximum specific stiffness. An intertwining method was chosen and developed as the best route to make lattice composite materials reinforced by carbon fibers. A sandwich-weaved sample with a three-dimensional intertwined lattice structure core was found to be best. The manufacturing of such a composite lattice material was outlined. In addition to a high shear strength of the core and the integral manufacturing method, the lattice sandwich structure is expected to possess better mech. capability.

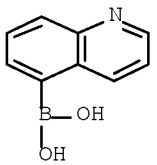
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 16 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:358117 ZCAPLUS Full-text
DOCUMENT NUMBER: 146:72834
TITLE: Design and experiment of high-current low-pressure plasma-cathode e-gun
AUTHOR(S): Xie, Wen-kai; Li, Xiao-yun; Wang, Bin; Meng, Lin; Yan, Yang; Gao, Xin-yan
CORPORATE SOURCE: Institute of High Energy Electronics, University of Electronics Science and Technology of China, Chengdu, 610054, Peop. Rep. China
SOURCE: Qiangjiguang Yu Lizishu (2006), 18(2), 235-240
CODEN: QYLIEL; ISSN: 1001-4322
PUBLISHER: Qiangjiguang Yu Lizishu Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The preliminary design of a new high-power low-pressure plasma-cathode e-gun is presented. Based on the hollow cathode effect and low-pressure glow discharge empirical formulas, the hollow cathode, the accelerating gap, and the working gas pressure region are given. The general exptl. device of the low-pressure plasma cathode electron-gun generating high c.d. e-beam source is shown. Expts. was done in continuous filled-in gases and gases-puff condition, and the discharging current of 150-200 A, the width of 60 μs and the collector current of 30-80 A, the width of 60 μs are obtained. The new plasma cathode e-gun can take the place of material cathode e-gun, especially in plasma filled microwave tubes.

L52 ANSWER 17 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:1119491 ZCAPLUS Full-text
DOCUMENT NUMBER: 144:18975
TITLE: A new type of boronic acid fluorescent reporter compound for sugar recognition
AUTHOR(S): Yang, Wenqian; Lin, Li; Wang, Binghe
CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA

SOURCE: Tetrahedron Letters (2005), 46(46), 7981-7984
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Fluorescent boronic acids that change fluorescent properties upon carbohydrate binding are very useful for the preparation of fluorescent sensors for sugars. Herein the authors report 5-quinolineboronic acid (5-QBA) that shows significant fluorescent property changes through a unique pKa-switching mechanism upon binding a diol in aqueous solution
IT 355386-94-6
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(new type of boronic acid fluorescent reporter compound for sugar recognition)
RN 355386-94-6 ZCAPLUS
CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)

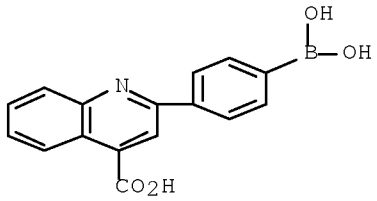


REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 18 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:266839 ZCAPLUS Full-text
DOCUMENT NUMBER: 147:427389
TITLE: Biological and medicinal applications of boronic acids
AUTHOR(S): Yang, Wenqian; Gao, Xingming; Wang, Binghe
CORPORATE SOURCE: JRIX Pharmaceuticals, Inc., Florence, SC, 29501, USA
SOURCE: Boronic Acids (2005), 481-512. Editor(s): Hall, Dennis G. Wiley-VCH Verlag GmbH & Co. KGaA: Weinheim, Germany.
CODEN: 69IZIO; ISBN: 978-3-527-30991-7
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review.
REFERENCE COUNT: 186 THERE ARE 186 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 19 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:6485 ZCAPLUS Full-text
DOCUMENT NUMBER: 142:459422
TITLE: A new type of water-soluble fluorescent boronic acid suitable for construction of polyboronic acids for carbohydrate recognition
AUTHOR(S): Yang, Wenqian; Lin, Li; Wang, Binghe
CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SOURCE: Heterocyclic Communications (2004), 10(6), 383-388

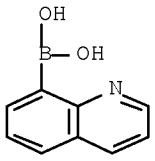
CODEN: HCOMEX; ISSN: 0793-0283
PUBLISHER: Freund Publishing House Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In this paper the authors report boronic acid 1 with a quinoline moiety as a new type of fluorescent probe for carbohydrates, which shows significant fluorescence intensity increases upon sugar binding at physiol. pH. This compound has the unique structural feature of separating the boronic acid moiety from the presumed fluorophore, and is ready for the construction of polyboronic acids through tethering to its carboxylic group for high selectivity and affinity recognition of carbohydrates of biol. interest.
IT 373384-17-9
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(water-soluble fluorescent boronic acid with quinoline moiety for carbohydrate recognition)
RN 373384-17-9 ZCAPLUS
CN 4-Quinolinecarboxylic acid, 2-(4-boronophenyl)- (9CI) (CA INDEX NAME)



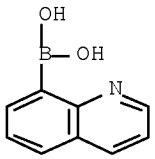
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 20 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:215761 ZCAPLUS Full-text
DOCUMENT NUMBER: 139:130191
TITLE: A novel type of fluorescent boronic acid that shows large fluorescence intensity changes upon binding with a carbohydrate in aqueous solution at physiological pH
AUTHOR(S): Yang, Wenqian; Yan, Jun; Springsteen, Greg; Deeter, Susan; Wang, Binghe
CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SOURCE: Bioorganic & Medicinal Chemistry Letters (2003), 13(6), 1019-1022
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In this paper we report 8-quinoline boronic acid as a novel type of fluorescent probe for carbohydrates. This boronic acid responds to the binding of a carbohydrate with over 40-fold increases in fluorescence intensity and shows optimal fluorescence change at physiol. pH in aqueous solution
IT 86-58-8, 8-Quinolineboronic acid 86-58-8D, 8-Quinolineboronic acid, esters
RL: ARG (Analytical reagent use); PRP (Properties); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(fluorescent 8-quinoline boronic acid that shows large fluorescence

intensity changes upon binding with a carbohydrate in aqueous solution at physiol. pH)
RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 21 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:190790 ZCAPLUS Full-text
TITLE: A diboronic acid fluorescence sensor with high affinity and selectivity for glucose
AUTHOR(S): Wang, Binghe; Gao, Xingming; Karnati, Vishnu Vardhan Reddy; Yang, Wenqian; Sankar, Sabapathy; Ni, Weijuan
CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SOURCE: Abstracts of Papers, 223rd ACS National Meeting, Orlando, FL, United States, April 7-11, 2002 (2002), ORGN-255. American Chemical Society: Washington, D. C.
CODEN: 69CKQP
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB Fifty diboronic acid-based fluorescent sensors have been synthesized. One (5-a) of them showed 43- and 49-fold selectivity for glucose over fructose and galactose, resp. Examination of the complex between 5-a and D-glucose by NMR and ESI-MS indicates the formation of a 1:1 complex in the glucofuranose form.

L52 ANSWER 22 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:618012 ZCAPLUS Full-text
TITLE: Fluorescent tags for cells expressing sialyl Lewis X
AUTHOR(S): Wang, Binghe; Yang, Wenqian; Gao, Shouhai; Gao, Xingming; Karnati, Vishnu Vardhan Reddy; Ni, Weijuan; Hooks, W. Borden; Carson, John; Weston, Brent

CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SOURCE: Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), MEDI-160. American Chemical Society: Washington, D. C.
CODEN: 69CZPZ
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English

AB It is well known that the expression and over-expression of certain cell surface carbohydrates are associated with the development of some cancer. Aimed at developing compds. that recognize certain cell-surface carbohydrates with high specificity and affinity, we have designed and synthesized a series of fluorescent anthracene diboronic acids as potential sensors for sialyl Lewis X (sLex). One of these compds. showed a strong fluorescence enhancement upon binding with sLex. Further biol. studies showed that this sensor compound was able to label sLex-expressing HEPG2 cells at 1 micromolar, while the non-expressing control cells were not stained.

L52 ANSWER 23 OF 24 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:510926 BIOSIS Full-text
DOCUMENT NUMBER: PREV200200510926
TITLE: Fluorescent tags for cells expressing sialyl Lewis X.
AUTHOR(S): Wang, Binghe [Reprint author]; Yang, Wenqian [Reprint author]; Gao, Shouhai [Reprint author]; Gao, Xingming [Reprint author]; Karnati, Vishnu Vardhan Reddy [Reprint author]; Ni, Weijuan [Reprint author]; Hooks, W. Borden; Carson, John; Weston, Brent
CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
binghe_wang@ncsu.edu
SOURCE: Abstracts of Papers American Chemical Society, (2002) Vol. 224, No. 1-2, pp. MEDI 160. print.
Meeting Info.: 224th National Meeting of the American Chemical Society. Boston, MA, USA. August 18-22, 2002.
CODEN: ACSRAL. ISSN: 0065-7727.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Oct 2002
Last Updated on STN: 2 Oct 2002
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Cytology - General 02502
Cytology - Human 02508
Biochemistry studies - General 10060
Pathology - Therapy 12512
Pharmacology - General 22002
Pharmacology - Clinical pharmacology 22005
Neoplasms - Pathology, clinical aspects and systemic effects 24004
INDEX TERMS: Major Concepts

Biochemistry and Molecular Biophysics; Cell Biology; Methods and Techniques; Oncology (Human Medicine, Medical Sciences); Pharmacology

INDEX TERMS: Diseases
cancer: neoplastic disease, drug therapy
Neoplasms (MeSH)

INDEX TERMS: Chemicals & Biochemicals
Sialyl Lewis X: expression; fluorescent anthracene diboronic acids: cellular fluorescent tag, pharmacodynamics, sensor, sialyl Lewis X detector, synthesis

INDEX TERMS: Methods & Equipment
chemical synthesis: Synthetic Techniques, pharmacological method, synthetic method

INDEX TERMS: Miscellaneous Descriptors
drug development; Meeting Abstract

ORGANISM: Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
HEPG2 cell line
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

REGISTRY NUMBER: 98603-84-0 (Sialyl Lewis X)

L52 ANSWER 24 OF 24 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

ACCESSION NUMBER: 2002:529933 BIOSIS Full-text

DOCUMENT NUMBER: PREV200200529933

TITLE: A diboronic acid fluorescence sensor with high affinity and selectivity for glucose.

AUTHOR(S): Wang, Binghe [Reprint author]; Gao, Xingming [Reprint author]; Vardhan, Vishnu [Reprint author]; Karnati, Reddy [Reprint author]; Yang, Wenquin [Reprint author]; Sankar, Sabapathy [Reprint author]; Ni, Weijun [Reprint author]

CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
binghe_wang@ncsu.edu

SOURCE: Abstracts of Papers American Chemical Society, (2002) Vol. 223, No. 1-2, pp. ORGN 255. print.
Meeting Info.: 223rd National Meeting of the American Chemical Society. Orlando, FL, USA. April 07-11, 2002.
CODEN: ACSRAL. ISSN: 0065-7727.

DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 16 Oct 2002
Last Updated on STN: 16 Oct 2002

CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Biochemistry studies - General 10060
Biochemistry studies - Carbohydrates 10068

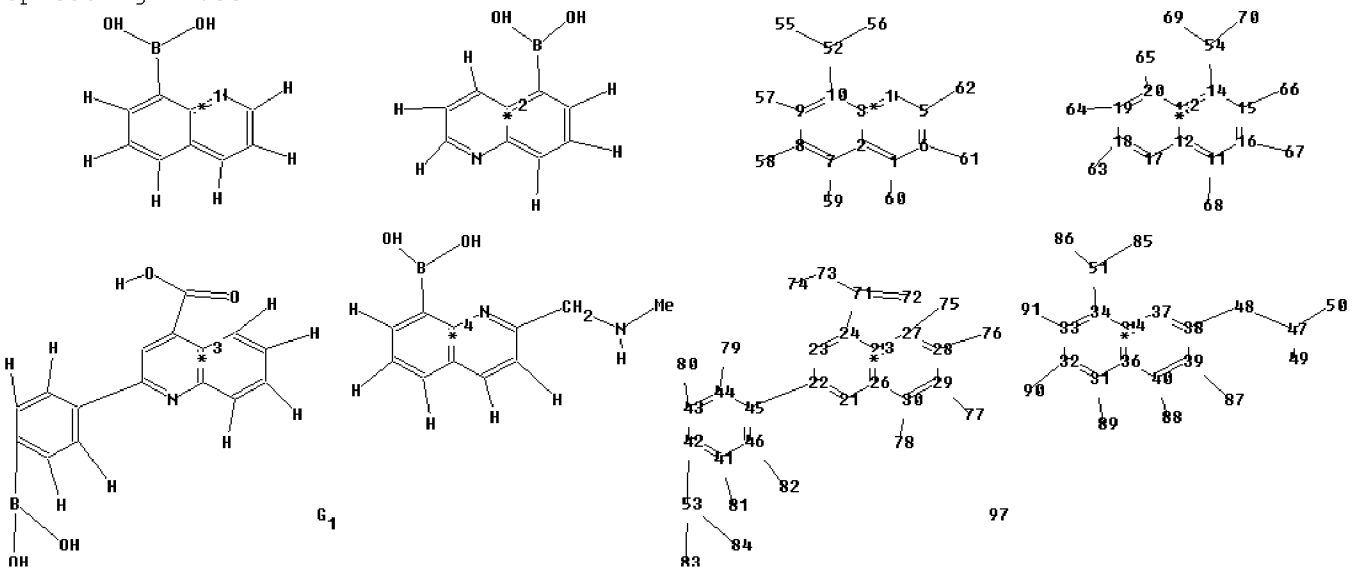
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics

INDEX TERMS: Chemicals & Biochemicals
D-glucose; diboronic acid; diboronic acid fluorescence sensor; fructose; galactose

INDEX TERMS: Miscellaneous Descriptors

molecular interaction; Meeting Abstract
REGISTRY NUMBER: 50-99-7 (D-glucose)
13675-18-8 (diboronic acid)
57-48-7Q (fructose)
30237-26-4Q (fructose)
59-23-4Q (galactose)
26566-61-0Q (galactose)

```
=> file registry
FILE 'REGISTRY' ENTERED AT 15:48:20 ON 31 MAR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   29 MAR 2009  HIGHEST RN 1129300-01-1
DICTIONARY FILE UPDATES:  29 MAR 2009  HIGHEST RN 1129300-01-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

Uploading L1.str
```



```
chain nodes :
47  48  49  50  51  52  53  54  55  56  57  58  59  60  61  62  63  64  65  66  67
68  69  70  71  72  73  74  75  76  77  78  79  80  81  82  83  84  85  86  87  88
89  90  91
97
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23
24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44
45  46
chain bonds :
```

```
1-60  5-62  6-61  7-59  8-58  9-57  10-52  11-68  14-54  15-66  16-67  18-63  19-64
20-65  22-45  24-71  27-75  28-76  29-77  30-78  31-89  32-90  33-91  34-51  38-48
39-87  40-88
41-81  42-53  43-80  44-79  46-82  47-48  47-49  47-50  51-85  51-86  52-55  52-56
53-83  53-84
54-69  54-70  71-72  71-73  73-74
ring bonds :
1-2  1-6  2-3  2-7  3-4  3-10  4-5  5-6  7-8  8-9  9-10  11-12  11-16  12-13  12-17
13-14  13-20  14-15  15-16  17-18  18-19  19-20  21-22  21-26  22-23  23-24  24-25
25-26  25-27
26-30  27-28  28-29  29-30  31-32  31-36  32-33  33-34  34-35  35-36  35-37  36-40
37-38  38-39
39-40  41-42  41-46  42-43  43-44  44-45  45-46
exact bonds :
1-60  5-62  6-61  7-59  8-58  9-57  10-52  11-68  14-54  15-66  16-67  18-63  19-64
20-65  22-45  24-71  27-75  28-76  29-77  30-78  31-89  32-90  33-91  34-51  38-48
39-87  40-88
41-81  42-53  43-80  44-79  46-82  47-48  47-49  47-50  51-85  51-86  52-55  52-56
53-83  53-84
54-69  54-70  73-74
normalized bonds :
1-2  1-6  2-3  2-7  3-4  3-10  4-5  5-6  7-8  8-9  9-10  11-12  11-16  12-13  12-17
13-14  13-20  14-15  15-16  17-18  18-19  19-20  21-22  21-26  22-23  23-24  24-25
25-26  25-27
26-30  27-28  28-29  29-30  31-32  31-36  32-33  33-34  34-35  35-36  35-37  36-40
37-38  38-39
39-40  41-42  41-46  42-43  43-44  44-45  45-46  71-72  71-73


G1:[*1],[*2],[*3],[*4]

Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:Atom  13:Atom  14:Atom  15:Atom  16:Atom  17:Atom  18:Atom  19:Atom
20:Atom  21:Atom
22:Atom  23:Atom  24:Atom  25:Atom  26:Atom  27:Atom  28:Atom  29:Atom  30:Atom
31:Atom  32:Atom
33:Atom  34:Atom  35:Atom  36:Atom  37:Atom  38:Atom  39:Atom  40:Atom  41:Atom
42:Atom  43:Atom
44:Atom  45:Atom  46:Atom  47:CLASS  48:CLASS  49:CLASS  50:CLASS  51:CLASS
52:CLASS  53:CLASS  54:CLASS
55:CLASS  56:CLASS  57:CLASS  58:CLASS  59:CLASS  60:CLASS  61:CLASS  62:CLASS
63:CLASS  64:CLASS
65:CLASS  66:CLASS  67:CLASS  68:CLASS  69:CLASS  70:CLASS  71:CLASS  72:CLASS
73:CLASS
74:CLASS  75:CLASS  76:CLASS  77:CLASS  78:CLASS  79:CLASS  80:CLASS  81:CLASS
82:CLASS  83:CLASS
84:CLASS  85:CLASS  86:CLASS  87:CLASS  88:CLASS  89:CLASS  90:CLASS  91:CLASS
97:CLASS




=> file zcaplus
FILE 'ZCAPLUS' ENTERED AT 15:48:24 ON 31 MAR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)
```

FILE COVERS 1907 - 31 Mar 2009 VOL 150 ISS 14
FILE LAST UPDATED: 30 Mar 2009 (20090330/ED)

ZCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCAPLUS' FILE

=> d stat que L12
L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L6 5 SEA FILE=REGISTRY SSS FUL L1
L9 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 86-58-8
L10 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 355386-94-6
L11 3 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L6 NOT (L9 OR L10)
L12 5 SEA FILE=ZCAPLUS SPE=ON ABB=ON PLU=ON L11

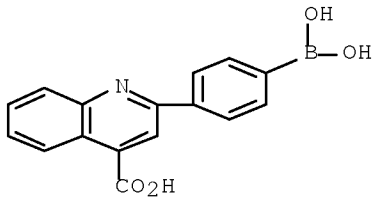
=> d ibib abs hitstr L12 1-5

L12 ANSWER 1 OF 5 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:928331 ZCAPLUS Full-text
DOCUMENT NUMBER: 149:288705
TITLE: Solution Phase Synthesis of a Diverse Library of Highly Substituted Isoxazoles
AUTHOR(S): Waldo, Jesse P.; Mehta, Saurabh; Neuenswander, Benjamin; Lushington, Gerald H.; Larock, Richard C.
CORPORATE SOURCE: Department of Chemistry, Iowa State University, Ames, IA, 50011, USA
SOURCE: Journal of Combinatorial Chemistry (2008), 10(5), 658-663
CODEN: JCCHFF; ISSN: 1520-4766
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 149:288705
AB The iodocyclization of O-methyloximes of 2-alkyn-1-ones afforded 4-iodoisoxazoles, which underwent various palladium-catalyzed reactions to yield 3,4,5-trisubstituted isoxazoles. The palladium-catalyzed processes have been adapted to parallel synthesis utilizing com. available boronic acid,

acetylene, styrene, and amine sublibraries. Accordingly, a diverse 51-member library of 3,4,5-trisubstituted isoxazoles has been generated.

IT 373384-17-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(solution phase synthesis of a diverse library of highly substituted isoxazoles)

RN 373384-17-9 ZCAPLUS
CN 4-Quinolinecarboxylic acid, 2-(4-boronophenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

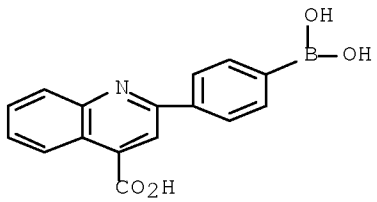
L12 ANSWER 2 OF 5 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:239227 ZCAPLUS Full-text
DOCUMENT NUMBER: 142:308776
TITLE: Water soluble boronic acid fluorescent reporter compounds and methods of use thereof
INVENTOR(S): Wang, Binghe; Gao, Xingming; Yang, Wenqian; Fang, Hao; Yan, Jun
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 80 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005024416	A1	20050317	WO 2004-US28838	20040907
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 20070274922	A1	20071129	US 2007-570807	20070531
PRIORITY APPLN. INFO.:			US 2003-500785P P	20030905
			WO 2004-US28838 W	20040907

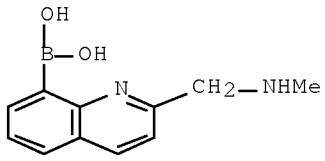
OTHER SOURCE(S): MARPAT 142:308776

AB Described herein are boronic acid fluorescent compds. and methods of use thereof.

IT 373384-17-9, 2-(4-Boronophenyl)-4-quinolinecarboxylic acid
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)
RN 373384-17-9 ZCAPLUS
CN 4-Quinolinecarboxylic acid, 2-(4-boronophenyl)- (9CI) (CA INDEX NAME)



IT 847862-01-5P
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)
RN 847862-01-5 ZCAPLUS
CN Boronic acid, B-[2-[(methylamino)methyl]-8-quinolinyl]- (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 5 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:6485 ZCAPLUS Full-text
DOCUMENT NUMBER: 142:459422
TITLE: A new type of water-soluble fluorescent boronic acid suitable for construction of polyboronic acids for carbohydrate recognition
AUTHOR(S): Yang, Wenqian; Lin, Li; Wang, Binghe
CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SOURCE: Heterocyclic Communications (2004), 10(6), 383-388
CODEN: HCOMEX; ISSN: 0793-0283
PUBLISHER: Freund Publishing House Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In this paper the authors report boronic acid 1 with a quinoline moiety as a new type of fluorescent probe for carbohydrates, which shows significant fluorescence intensity increases upon sugar binding at physiol. pH. This compound has the unique structural feature of separating the boronic acid moiety from the presumed fluorophore, and is ready for the construction of

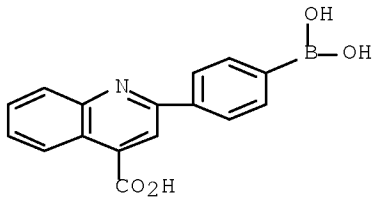
polyboronic acids through tethering to its carboxylic group for high selectivity and affinity recognition of carbohydrates of biol. interest.

IT 373384-17-9

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (water-soluble fluorescent boronic acid with quinoline moiety for carbohydrate recognition)

RN 373384-17-9 ZCAPLUS

CN 4-Quinolinecarboxylic acid, 2-(4-boronophenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 5 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1959:77801 ZCAPLUS Full-text

DOCUMENT NUMBER: 53:77801

ORIGINAL REFERENCE NO.: 53:14104h-i

TITLE: Acylation of 1-substituted 3,4-dihydroisoquinolines

AUTHOR(S): Gardent, Jean

SOURCE: Compt. rend. (1958), 247, 2010-13

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

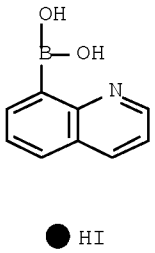
AB 1-Substituted 3,4-dihydroisoquinolines are acylated with or without ring-opening, depending on the substituent and the conditions. The cleaved acyl derivative reacts with NH2OH in various ways [Brossi, et al., Chimia 12, 114(1958)]. BzCl-NaOH at 100° with the appropriate 1-substituted-3,4-dihydroisoquinoline yields the following benzoylamines by ring cleavage: 2-benzoylphenylethyl, m. 107°; 2-benzoyl-4,5-diethoxyphenylethyl, m. 127° (oxime, m. 149°); 2-(3',4'-dimethoxyphenylacetyl)-4,5-dimethoxyphenylethyl, m. 133-4°; 2-hexanoyl-4,5-diethoxyphenylethyl, m. 124°. Benzoyl dihydropapaveraldine (open form) m. 168°; N-benzoyldihydropapaverine (closed form) m. 222°; (open form) m. 145-6°; N-benzoyl-1-styryl-6,7-diethoxydihydroisoquinoline (open form), m. 154° (hydroxylamine derivative m. 130°).

IT 127544-62-1

(Derived from data in the 6th Collective Formula Index (1957-1961))

RN 127544-62-1 ZCAPLUS

CN 8-Quinolineboronic acid, hydriodide (6CI) (CA INDEX NAME)



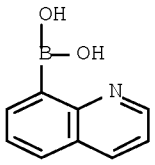
● HI

L12 ANSWER 5 OF 5 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1959:77800 ZCAPLUS Full-text
DOCUMENT NUMBER: 53:77800
ORIGINAL REFERENCE NO.: 53:14104d-h
TITLE: Fluoro derivatives of polycyclic carcinogenic compounds
AUTHOR(S): Bergmann, Ernst D.; Blum, Jochanan; Butanaro, Sara; Heller, Adam
CORPORATE SOURCE: Hebrew Univ., Jerusalem, Israel
SOURCE: Tetrahedron Letters (1959), 1, 15-18
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB On the assumption that the determining step in the carcinogenic process in an aromatic hydrocarbon is an electrophilic reaction of the "K" region it is predicted that if the electrophilic substitution takes place only at the fluorinated C atom the carcinogenic activity will decrease but that if substitution takes place only at the nonfluorinated atom or simultaneously on both the fluorinated and nonfluorinated atoms the carcinogenic activity will increase. To test the validity of these theoretical considerations various fluoro derivs. of carcinogenic polycyclics were synthesized. Condensation of 4-FC10H6NH2 with p- and m-MeC6H4NH2 and the N-(p- and -m-tolyl) derivs. (m. 74-5°, b2 187-9°, and m. 53°, b10 208°, resp.) cyclized with ZnCl2 and Ac2O gave 5,7-dimethyl-3-fluoro-1,2-benzacridine (I), m. 174° [picrate, m. 218-20° (decomposition)], and 5,8-dimethyl-3-fluoro-1,2-benzacridine (II), m. 173-5°; picrate, m. 210-13° (decomposition). Treatment of o-C6H4(CO)2O with 4-FC10H6MgBr (from 4-FC10H6Br, m. 36°, b0.8 108°) yielded 53% o-(4-FC10H6CO)C6H4CO2H (III), m. 161° (PhMe). Reaction of III with MeMgBr gave the lactone, m. 140° (alc.), reduced by Zn and HCl or by P and HI in 40 and 100% yields, resp., to o-(4-FC10H6CHMe)C6H4CO2H, m. 170.5-71° (MeNO2), cyclized with H2SO4 to yield 88% 7,12-dihydro-5-fluoro-12-methylbenz[a]anthracen-7-one (III), m. 130°, converted by reduction with Zn dust and aqueous NaOH and subsequent dehydration with alc. HCl to 87% 5-fluoro-12-methylbenz[a]anthracene (V), m. 54° (alc.). Treatment of IV with MeMgI gave 76% 5-fluoro-7,12-dimethylbenz[a]anthracene (VI), m. 94° (C6H12). Ultraviolet spectra in CHCl3 are tabulated (compound and λ in mμ (log ε) given): I, 274, 283, 285, 296, 342, 369, 390 (4.65, 4.72, 4.75, 4.70, 3.88, 3.92, 3.90); II, 264, 272, 284, 294, 322, 336, 355, 374, 395 (4.52, 4.58, 4.71, 4.64, 3.83, 3.89, 3.83, 3.90, 3.95); V, 285, 295, 348, 396 (4.78, 4.38, 3.79, 3.04); VI, 289, 300, 366 (4.65, 4.68, 3.78).

IT 127544-62-1
(Derived from data in the 6th Collective Formula Index (1957-1961))

RN 127544-62-1 ZCAPLUS
CN 8-Quinolineboronic acid, hydriodide (6CI) (CA INDEX NAME)



● HI

```
=> file registry
FILE 'REGISTRY' ENTERED AT 15:49:15 ON 31 MAR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   29 MAR 2009  HIGHEST RN 1129300-01-1
DICTIONARY FILE UPDATES:  29 MAR 2009  HIGHEST RN 1129300-01-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> file zcaplus
FILE 'ZCAPLUS' ENTERED AT 15:49:24 ON 31 MAR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS is
strictly prohibited.

FILE COVERS 1907 - 31 Mar 2009  VOL 150 ISS 14
FILE LAST UPDATED: 30 Mar 2009  (20090330/ED)

ZCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCAPLUS' FILE

=> d stat que L29
```

```
L9             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  86-58-8
L13          106 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L9
L24       598735 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  ?FLUORESC?/BI
L25            5 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L24 AND L13
L26            2 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L25 AND PY<2004
L27            2 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L25 AND PRY<2004
L28            0 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L25 AND AY<2004
L29            4 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  (L26 OR L27 OR L28)


=> d stat que L13
L9             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  86-58-8
L13          106 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L9


=> d ibib abs hitind hitstr L29 1-4; d ibib abs hitstr L13 102-106

L29  ANSWER 1 OF 4  ZCAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:         2005:239227  ZCAPLUS  Full-text
DOCUMENT NUMBER:          142:308776
TITLE:                    Water soluble boronic acid fluorescent reporter
                          compounds and methods of use thereof
INVENTOR(S):              Wang, Binghe; Gao, Xingming; Yang, Wenqian; Fang, Hao;
                          Yan, Jun
PATENT ASSIGNEE(S):       USA
SOURCE:                   PCT Int. Appl., 80 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
     ---------------      ----   --------    -------------------    --------
     WO 2005024416         A1    20050317    WO 2004-US28838        20040907 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
     US 20070274922        A1    20071129    US 2007-570807         20070531 <--
PRIORITY APPLN. INFO.:                       US 2003-500785P     P  20030905 <--
                                             WO 2004-US28838     W  20040907
OTHER SOURCE(S):          MARPAT 142:308776
AB    Described herein are boronic acid fluorescent compds. and methods of use
      thereof.
IC    ICM  G01N033-00
CC    80-3 (Organic Analytical Chemistry)
      Section cross-reference(s): 9, 33, 64
ST    water soluble boronic acid fluorescent indicator
IT    Bacterium (genus)
      Biosensors
      Blood analysis
      Cell
```

Fluorescent indicators
Formation constant
Lithiation
Microtiter plates
Parasite
Pharmaceutical analysis
Tumor markers
Virus
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT Antibodies and Immunoglobulins
Blood-group substances
Carbohydrates, analysis
DNA
Glycolipids
Haptens
Ligands
Oligosaccharides, analysis
RNA
RL: ANT (Analyte); ANST (Analytical study)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT Nucleic acids
Oligonucleotides
Peptides, analysis
RL: ANT (Analyte); ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT Dendritic polymers
Glycoproteins
Lipids, uses
Lipopolysaccharides
Macromolecular compounds
Polymers, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT Acids, uses
Group IIIA element compounds
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(boronic acids; analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT Proteins
RL: ANT (Analyte); ANST (Analytical study)
(membrane; analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT 50-70-4, Sorbitol, analysis 50-99-7, D-Glucose, analysis 57-48-7, D-Fructose, analysis 59-23-4, D-Galactose, analysis 63-42-3, Lactose 147-81-9, Arabinose 2438-80-4, L-Fucose 3458-28-4, D-Mannose 17598-81-1, Tagatose 71208-06-5, Lewis X 82993-43-9 92448-22-1, Sialyl Lewis a 98603-84-0, Sialyl Lewis X
RL: ANT (Analyte); ANST (Analytical study)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT 86-58-8, 8-Quinolineboronic acid 98437-23-1, 2-Benzothienylboronic acid 355386-94-6, 5-Quinolinylboronic acid 371764-64-6, 4-Quinolinylboronic acid 373384-17-9, 2-(4-Boronophenyl)-4-quinolinecarboxylic acid 590417-32-6, [6-(Dimethylamino)-2-naphthalenyl]-boronic acid

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

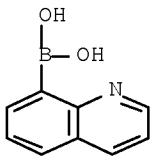
IT 636987-06-9P, 4-(Dimethylamino)naphthaleneboronic acid 847862-01-5P
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT 4766-33-0P, 5-Amino-1-bromonaphthalene 5328-76-7P, 5-Nitro-1-bromonaphthalene 10586-45-5P, 5-(Dimethylamino)-1-bromonaphthalene 61047-43-6P, 8-Bromo-2-methylquinoline 847861-96-5P 847861-97-6P 847861-98-7P 847861-99-8P 847862-00-4P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT 86-57-7, 1-Nitronaphthalene 121-43-7, Trimethylborate 615-36-1, 2-Bromoaniline 4170-30-3, Crotonaldehyde 24424-99-5 59557-93-6, 1-Bromo-4-(dimethylamino)naphthalene 201733-56-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT 86-58-8, 8-Quinolineboronic acid
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

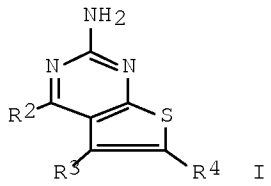
L29 ANSWER 2 OF 4 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:216822 ZCAPLUS Full-text
DOCUMENT NUMBER: 142:298124
TITLE: Preparation of pyrimidothiophenes as HSP90 inhibitors
INVENTOR(S): Dymock, Brian William; Drysdale, Martin James; Fromont, Christofe; Jordan, Allan
PATENT ASSIGNEE(S): Vernalis Cambridge Ltd., UK; Cancer Research Technology Ltd.; The Institute of Cancer Research; Barril-Alonso, Xavier
SOURCE: PCT Int. Appl., 132 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2005021552	A1	20050310	WO 2004-GB3641	20040826 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004268820	A1	20050310	AU 2004-268820	20040826 <--
CA 2537135	A1	20050310	CA 2004-2537135	20040826 <--
EP 1675861	A1	20060705	EP 2004-768197	20040826 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
CN 1842532	A	20061004	CN 2004-80024701	20040826 <--
BR 2004013861	A	20061024	BR 2004-13861	20040826 <--
JP 2007533611	T	20071122	JP 2006-524418	20040826 <--
MX 2006002118	A	20060920	MX 2006-2118	20060223 <--
KR 2007055414	A	20070530	KR 2006-704012	20060227 <--
IN 2006CN01046	A	20070629	IN 2006-CN1046	20060327 <--
NO 2006001416	A	20060523	NO 2006-1416	20060328 <--
US 20070043044	A1	20070222	US 2006-569287	20061006 <--
PRIORITY APPLN. INFO.:			GB 2003-20300 A	20030829 <--
			GB 2003-27924 A	20031202 <--
			GB 2004-14467 A	20040629
			WO 2004-GB3641 W	20040826

OTHER SOURCE(S): CASREACT 142:298124; MARPAT 142:298124

GI



I

AB Pyrimidothiophenes I [R2 = (Ar1)m-(Alk1)p-Zr-(Alk2)s-Q; Ar1 = (un)substituted aryl, heteroaryl; Alk1, Alk2 = (un)substituted alkylene, alkenylene; m-s = 0, 1; Z = O, S, COP, CS, SO2, CO2, (un)substituted CONH, CSNH, SO2NH, NHCO, NHSO2, NH; Q = H, carbocyclic, heterocyclic; R3 = H, (un)substituted alkyl, aryl, heteroaryl; R4 = carboxylic ester, carboxamide, sulfonamide] were prepared for use as HSP90 inhibitors. Thus, 2-amino-4,6-dichloro-5-formylpyrimidine was treated with HSCH2CO2Et, followed by Suzuki reaction with PhB(OH)2 to give I [R2 = Ph, R3 = H, R4 = CO2Et] which showed activity in the fluorescence polarization assay for HSP90 inhibition.

IC ICM C07D495-04
ICS A61K031-00; A61P035-00

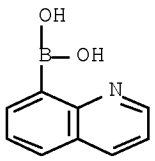
CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1

IT 51-45-6, 1H-Imidazole-5-ethanamine 64-04-0, Benzeneethanamine

86-58-8 91-00-9 98-80-6, Phenylboronic acid 100-51-6, Benzyl alcohol, reactions 100-52-7, Benzaldehyde, reactions 104-47-2 104-78-9 104-88-1, 4-Chlorobenzaldehyde, reactions 105-36-2, Ethyl bromoacetate 105-56-6, Ethyl cyanoacetate 106-94-5, 1-Bromopropane 108-00-9 109-01-3 120-57-0, 1,3-Benzodioxole-5-carboxaldehyde 138-39-6 140-29-4, Benzeneacetonitrile 351-54-2 585-32-0 623-51-8, Ethyl mercaptoacetate 627-35-0 687-51-4 2032-35-1, Bromoacetaldehyde diethylacetal 2038-03-1, 4-Morpholineethanamine 2620-50-0, 1,3-Benzodioxole-5-methanamine 2740-83-2 3731-52-0, 3-Pyridinemethanamine 4363-35-3, 2-Phenylvinylboronic acid 4439-02-5, 1,3-Benzodioxole-5-acetonitrile 4510-08-1 4985-46-0 5292-43-3 5332-73-0 5392-81-4, 2-Diethylaminoethyl bromide 5527-95-7 5604-46-6, 2-Amino-4,6-dichloro-5-formylpyrimidine 5779-72-6 5980-97-2 6165-69-1 6238-14-8, 1-Azabicyclo[2.2.2]octan-3-amine 6967-12-0, 1H-Indazol-6-amine 7663-77-6 14003-16-8 14900-39-1 20173-24-4, 3-Pyridineethanamine 20845-34-5, (1-Methylpiperidin-2-yl)methanol 21987-29-1 27757-85-3, 2-Thiophenemethanamine 28739-42-6 29668-44-8 30433-91-1, 2-Thiopheneethanamine 36276-24-1, 3-Bromo-4-methylbenzaldehyde 39489-77-5, 2,4-Dichloro-5-nitrophenol 40299-87-4 53929-74-1 54035-94-8 55499-44-0, 2,4-Dimethylbenzeneboronic acid 59239-44-0 63503-60-6 73183-34-3 81731-43-3 86595-37-1 87199-16-4 87199-17-5 94614-83-2 98437-24-2 100224-74-6, Guanidine carbonate 100379-00-8 113893-08-6 126401-89-6 126747-14-6 128796-39-4 129271-98-3, 1-Phenylsulfonyl-1H-indole-3-boronic acid 130870-00-7 148839-33-2 153624-46-5 192182-56-2 209919-30-2 214839-25-5 313546-18-8 342408-78-0 351422-73-6 352525-91-8 372963-49-0 385370-80-9 423176-38-9 677743-50-9 847560-47-8 847560-49-0, 4-Benzyloxy-2-Methylphenylboronic acid 847560-56-9 871231-32-2 876189-18-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of pyrimidothiophenes as HSP90 inhibitors)

IT 86-58-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of pyrimidothiophenes as HSP90 inhibitors)

RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 3 OF 4 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:215761 ZCAPLUS Full-text
DOCUMENT NUMBER: 139:130191
TITLE: A novel type of fluorescent boronic acid that shows large fluorescence intensity changes upon binding with a carbohydrate in aqueous solution at physiological pH
AUTHOR(S): Yang, Wenqian; Yan, Jun; Springsteen, Greg; Deeter, Susan; Wang, Binghe

CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SOURCE: Bioorganic & Medicinal Chemistry Letters (2003), 13(6), 1019-1022
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In this paper we report 8-quinoline boronic acid as a novel type of fluorescent probe for carbohydrates. This boronic acid responds to the binding of a carbohydrate with over 40-fold increases in fluorescence intensity and shows optimal fluorescence change at physiol. pH in aqueous solution

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 22, 33

ST quinoline boronate fluorescence carbohydrate physiol pH soln

IT Fluorescence
Fluorescent indicators
Fluorometry
pH
(fluorescent 8-quinoline boronic acid that shows large fluorescence intensity changes upon binding with a carbohydrate in aqueous solution at physiol. pH)

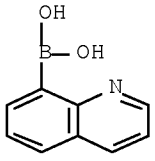
IT Carbohydrates, analysis
RL: ANT (Analyte); PRP (Properties); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(fluorescent 8-quinoline boronic acid that shows large fluorescence intensity changes upon binding with a carbohydrate in aqueous solution at physiol. pH)

IT 50-99-7, D-Glucose, analysis 57-48-7, D-Fructose, analysis 59-23-4, D-Galactose, analysis 87-81-0, D-Tagatose 5328-37-0, L-Arabinose
RL: ANT (Analyte); PRP (Properties); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(fluorescent 8-quinoline boronic acid that shows large fluorescence intensity changes upon binding with a carbohydrate in aqueous solution at physiol. pH)

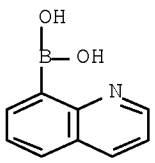
IT 86-58-8, 8-Quinolineboronic acid 86-58-8D, 8-Quinolineboronic acid, esters
RL: ARG (Analytical reagent use); PRP (Properties); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(fluorescent 8-quinoline boronic acid that shows large fluorescence intensity changes upon binding with a carbohydrate in aqueous solution at physiol. pH)

IT 86-58-8, 8-Quinolineboronic acid 86-58-8D, 8-Quinolineboronic acid, esters
RL: ARG (Analytical reagent use); PRP (Properties); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(fluorescent 8-quinoline boronic acid that shows large fluorescence intensity changes upon binding with a carbohydrate in aqueous solution at physiol. pH)

RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 4 OF 4 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1970:493281 ZCAPLUS Full-text
DOCUMENT NUMBER: 73:93281
ORIGINAL REFERENCE NO.: 73:15217a,15220a
TITLE: Environmental effects upon the photoluminescence of 8-quinolineboronic acid
AUTHOR(S): Goldman, Michael; Wehry, E. L.
CORPORATE SOURCE: Dep. of Chem., Indiana Univ., Bloomington, IN, USA
SOURCE: Analytical Chemistry (1970), 42(11), 1186-8
CODEN: ANCHAM; ISSN: 0003-2700
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The luminescence of 8-quinolineboronic acid (I) has been compared with that of quinoline, as well as that exhibited by 5- and 8-hydroxyquinoline. In contrast to the hydroxyquinolines, singlet → triplet intersystem crossing is an important process for I in both hydrocarbon and hydroxylic solvents, implying that a low-lying (n, π*) excited singlet state plays an important role in determining its luminescence characteristics. The fluorescence efficiency of I is not significantly affected by H-bond-accepting species, but singlet-to-ground internal conversion, presumably involving solvent interactions with the -B(OH)2 group, is an important process for this mol. in hydroxylic media. The luminescence behavior of I is shown to be consistent with the predictions of MO calcns. previously reported.

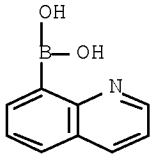
CC 73 (Spectra by Absorption, Emission, Reflection, or Magnetic Resonance, and Other Optical Properties)

IT Fluorescence
Luminescence
(of quinolineboronic acid, solvent effects on)

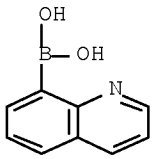
IT 86-58-8
RL: PRP (Properties)
(luminescence of, solvent effects on)

IT 86-58-8
RL: PRP (Properties)
(luminescence of, solvent effects on)

RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



L13 ANSWER 102 OF 106 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1964:60992 ZCAPLUS Full-text
DOCUMENT NUMBER: 60:60992
ORIGINAL REFERENCE NO.: 60:10705a-c
TITLE: Areneboronic acids with neighboring amine groups
AUTHOR(S): Letsinger, Robert L.
CORPORATE SOURCE: Northwestern Univ., Evanston, IL
SOURCE: Advances in Chemistry Series (1964), 42, 1-16
CODEN: ADCSAJ; ISSN: 0065-2393
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB 8-Quinolineboronic acid (I), 2-(2-boronophenyl)benzimidazole (II), and 2-(2-boronobenzyl)benzimidazole were found to catalyze a reaction of chloroethanol with water or alcs. in the presence of collidine. 2-(2-Pyridyl-2-ethynyl)benzeneboronic acid (III), in which the borono and amine functional groups are farther separated than in these compds., did not exhibit comparable activity; however, it underwent isomerization in chloroethanol to a substance which was an active catalyst. The unusual reactivity of these B-N compds. is attributed to cooperation of the boronic acid and amine groups in acting on the hydroxylic substrates. Spectral data relevant to the structures of the compds. are presented and mechanistic pathways for the catalytic reactions are discussed.
IT 86-58-8, 8-Quinolineboronic acid
RL: PREP (Preparation)
(preparation of)
RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



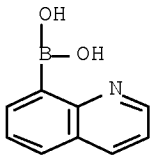
L13 ANSWER 103 OF 106 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1963:435678 ZCAPLUS Full-text
DOCUMENT NUMBER: 59:35678
ORIGINAL REFERENCE NO.: 59:6426a-b
TITLE: Stereochemistry of the reaction of 8-quinolineboronic acid with chloro alcohols

AUTHOR(S): Letsinger, Robert L.; Morrison, James D.
CORPORATE SOURCE: Northwestern Univ., Evanston, IL
SOURCE: Journal of the American Chemical Society (1963), 85(15), 2227-9
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The reaction of I with two pairs of stereoisomeric chlorohydrins was investigated. In two-step reactions, involving treatment of the chlorohydrin with I and hydrolysis of the cyclic esters thereby produced, trans-2-chloro-1-indanol was converted to cis-1,2-indandiol, and erythro-2-chloro-1,2-diphenylethanol was converted to dl-hydrobenzoin in good yield. cis-2-Chloro-1-indanol did not undergo carbon-chlorine fission when treated with I under the conditions used for reaction of the trans isomer, and threo-2-chloro-1,2-diphenylethanol afforded in a very slow reaction a low yield of meso-hydrobenzoin. The mechanistic implications of the stereoselectivity of the reaction of 8-quinolineboronic acid are discussed.

IT 86-58-8, 8-Quinolineboronic acid
(reaction with chloro alcs., stereochemistry of)

RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



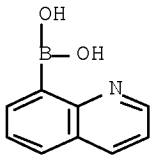
L13 ANSWER 104 OF 106 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1963:435677 ZCAPLUS Full-text
DOCUMENT NUMBER: 59:35677
ORIGINAL REFERENCE NO.: 59:6425h,6426a
TITLE: Organoboron compounds. XIV. Polyfunctional catalysis by 8-quinolineboronic acid
AUTHOR(S): Letsinger, R. L.; Dandegaonker, S.; Vullo, W. J.; Morrison, J. D.
CORPORATE SOURCE: Northwestern Univ., Evanston, IL
SOURCE: Journal of the American Chemical Society (1963), 85(15), 2223-7
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.

AB 8-Quinolineboronic acid (I) was found to be a polyfunctional catalyst for hydrolysis of chloroethanol and 3-chloro-1-propanol in dimethylformamide solns. containing water and collidine. In the absence of I, the chloro alcs. underwent slow solvolysis in dimethylformamide solution to products that were not glycols. Both water and ethylene glycol inhibited the catalytic reaction when present in high concentration It is proposed that the boronic acid group in I functions as a binding site for the chloro alc. and that the nitrogen participates in the reaction as a basic or nucleophilic transforming site.

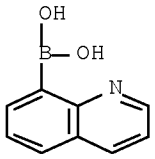
IT 86-58-8, 8-Quinolineboronic acid
(as catalyst in hydrolysis of 2-chloroethanol or 3-chloro-1-propanol)

RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



(reaction with chloro alcs., stereochemistry of

L13 ANSWER 105 OF 106 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1960:62736 ZCAPLUS Full-text
DOCUMENT NUMBER: 54:62736
ORIGINAL REFERENCE NO.: 54:12140b-c
TITLE: Acid induced rearrangement of 8-isopropyl-1-naphthoic acid and 8-isopropyl-5,6,7,8-tetrahydro-1-naphthoic acid. Investigation into the nature of the reaction of 8-quinoline-boronic acid and chloro alcohols
AUTHOR(S): Vullo, William J.
CORPORATE SOURCE: Northwestern Univ., Evanston, IL
SOURCE: (1960) 136 pp. Avail.: Univ. Microfilms (Ann Arbor, Mich.), Order No. 60-460
From: Dissertation Abstr. 20, 3521-2
DOCUMENT TYPE: Dissertation
LANGUAGE: Unavailable
AB Unavailable
IT 86-58-8, 8-Quinolineboronic acid
(reaction with chloro alcs.)
RN 86-58-8 ZCAPLUS
CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



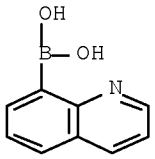
L13 ANSWER 106 OF 106 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1959:77802 ZCAPLUS Full-text
DOCUMENT NUMBER: 53:77802
ORIGINAL REFERENCE NO.: 53:14104i,14105a-f
TITLE: Organoboron compounds. IX. 8-Quinolineboronic acid, its preparation and influence on reactions of chlorohydrins
AUTHOR(S): Letsinger, Robert L.; Dandegaonker, S. H.
CORPORATE SOURCE: Northwestern Univ., Evanston, IL
SOURCE: Journal of the American Chemical Society (1959), 81, 498-501
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. C.A. 53, 9198d. 8-Bromoquinoline (18 g.) in 60 cc. Et2O added at -39° during 20 min. to 0.216 mole BuLi (cooled to -78°), the mixture stirred 0.5 hr. at -78°, treated during 20 min. dropwise with 76 g. (BuO)3B in 100 cc. Et2O at -39°, stirred 2 hrs., warmed to room temperature overnight, and treated with cold dilute HCl, the aqueous layer neutralized with NaHCO3, and the precipitate recrystd. (EtOH) yielded 11.85 g. 8-quinolineboronic acid (I), m. above 300°. I (0.65 g.) in 15 cc. AcOH and 7 cc. H2O treated at room temperature with 15 cc. 30% H2O2 at room temperature, diluted with H2O, and neutralized with NaHCO3 yielded 0.415 g. 8-hydroxyquinoline, m. 69-70°. I (0.630 g.) heated 36 hrs. with 0.5 g. H2O at 225° in a sealed tube and the product isolated with Et2O yielded quinoline (Ia), identified as the methiodide, m. 133-4°; the aqueous filtrate evaporated gave 0.164 g. B(OH)3. I (0.358 g.) and 0.23 g. o-C6H4(NH2)2 refluxed in 50 cc. C6H6 and evaporated gave 0.50 g. of the corresponding dihydrobenzoboradiazole, m. 188-9° (CCl4). I with HI gave 92% I.MeI, m. 166-8°. MeI (13.0 g.), 2.70 g. I, and 200 cc. absolute EtOH refluxed 15 hrs. and evaporated gave 92% I.MeI, m. 168-9° (EtOH). Ia (3.25 g.), 14.85 g. MeI, and 50 cc. EtOH refluxed 18 hrs. and evaporated yielded 6.78 g. methiodide, m. 133°. BuOH (10 g.), 2.9 g. I, and 60 cc. C6H6 distilled azeotropically and worked up gave 2.8 g. Bu ester (II) of I, b4 180°, n25D 1.4840. MeI (5 g.) and 4.93 g. II heated 12 hrs. on the steam bath and evaporated, and the residue washed with Et2O and pentane yielded 7.10 g. II.MeI, hygroscopic solid, m. 70-5°; a 2.21-g. portion steam distilled and the residue evaporated gave 1.81 g. Ia methiodide, m. 135-6°. PhMe (40 cc.), 5 g. Cl(CH2)2OH, b. 127°, n20D 1.4415, and 0.82 g. I partially distilled and cooled gave 1.31 g. ClCH2CH2 ester of I, m. 193-4° (PhMe). Cl(CH2)2OH and I (8.00 millimoles) each diluted with HCONMe2 to 50.0 cc., the mixture heated at 90.0°, and 5.00 cc. aliquots taken and titrated for chloride ions showed 44.3% reaction after 24 hrs. Cl(CH2)2OH without and with added 8.00 millimoles Ia, and with 8.00 millimoles Ia and PbB(OH)2 showed under similar conditions 4.0, 4.3, and 3.4% reaction, resp. Cl(CH2)3OH, b13 62°, n20D 1.4470, and I gave 44.5% reaction, while without or with added 8.00 millimoles Ia, the reaction proceeded only to 2.9 and 3.6%, resp. AmCl without and with Ia and with 8.00 millimoles I and BuOH added gave 3.6, 2.2, and 3.5% reaction, resp. The 1st-order rate constant for the reaction of Cl(CH2)4OH, b16 85°, n20D 1.4520, in HCONMe2 was k 0.09 hr.-1; it is of the order of 60-80 times greater than the rate consts. for Cl(CH2)2OH and Cl(CH2)3OH. The rate of the chloride ion formation from Cl(CH2)4OH (8.00 millimoles) in 50 cc. HCONMe2 at 89.3° with Ia, with Ia and PhB(OH)2, with PhB(OH)2, and with I is represented graphically.

IT 86-58-8, 8-Quinolineboronic acid
(and derivs.)

RN 86-58-8 ZCAPLUS

CN Boronic acid, B-8-quinolinyl- (CA INDEX NAME)



```
=> file registry
FILE 'REGISTRY' ENTERED AT 15:50:33 ON 31 MAR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   29 MAR 2009  HIGHEST RN 1129300-01-1
DICTIONARY FILE UPDATES:  29 MAR 2009  HIGHEST RN 1129300-01-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> file zcaplus
FILE 'ZCAPLUS' ENTERED AT 15:50:36 ON 31 MAR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS is
strictly prohibited.

FILE COVERS 1907 - 31 Mar 2009  VOL 150 ISS 14
FILE LAST UPDATED: 30 Mar 2009  (20090330/ED)

ZCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCAPLUS' FILE

=> d stat que L34
```

```
L10           1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  355386-94-6
L14          49 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L10
L24      598735 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  ?FLUORESC?/BI
L30           3 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L14 AND L24
L31           0 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L30 AND PY<2004
L32           1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L30 AND PRY<2004
L33           0 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L30 AND AY<2004
L34           1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  (L31 OR L32 OR L33)


=> d stat que L14
L10           1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  355386-94-6
L14          49 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L10


=> d ibib abs hitind hitstr L34 1; d ibib abs hitstr L14 45-49

L34  ANSWER 1 OF 1  ZCAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:         2005:239227  ZCAPLUS  Full-text
DOCUMENT NUMBER:          142:308776
TITLE:                    Water soluble boronic acid fluorescent reporter
                          compounds and methods of use thereof
INVENTOR(S):              Wang, Binghe; Gao, Xingming; Yang, Wenqian; Fang, Hao;
                          Yan, Jun
PATENT ASSIGNEE(S):       USA
SOURCE:                   PCT Int. Appl., 80 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
     ---------------      ----   --------    -------------------    --------
     WO 2005024416         A1    20050317    WO 2004-US28838        20040907 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
     US 20070274922        A1    20071129    US 2007-570807         20070531 <--
PRIORITY APPLN. INFO.:                     US 2003-500785P     P   20030905 <--
                                           WO 2004-US28838     W   20040907
OTHER SOURCE(S):          MARPAT 142:308776
AB    Described herein are boronic acid fluorescent compds. and methods of use
      thereof.
IC    ICM  G01N033-00
CC    80-3 (Organic Analytical Chemistry)
      Section cross-reference(s): 9, 33, 64
ST    water soluble boronic acid fluorescent indicator
IT    Bacterium (genus)
      Biosensors
      Blood analysis
      Cell
```

Fluorescent indicators
Formation constant
Lithiation
Microtiter plates
Parasite
Pharmaceutical analysis
Tumor markers
Virus
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT Antibodies and Immunoglobulins
Blood-group substances
Carbohydrates, analysis
DNA
Glycolipids
Haptens
Ligands
Oligosaccharides, analysis
RNA
RL: ANT (Analyte); ANST (Analytical study)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT Nucleic acids
Oligonucleotides
Peptides, analysis
RL: ANT (Analyte); ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT Dendritic polymers
Glycoproteins
Lipids, uses
Lipopolysaccharides
Macromolecular compounds
Polymers, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT Acids, uses
Group IIIA element compounds
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(boronic acids; analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT Proteins
RL: ANT (Analyte); ANST (Analytical study)
(membrane; analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT 50-70-4, Sorbitol, analysis 50-99-7, D-Glucose, analysis 57-48-7, D-Fructose, analysis 59-23-4, D-Galactose, analysis 63-42-3, Lactose 147-81-9, Arabinose 2438-80-4, L-Fucose 3458-28-4, D-Mannose 17598-81-1, Tagatose 71208-06-5, Lewis X 82993-43-9 92448-22-1, Sialyl Lewis a 98603-84-0, Sialyl Lewis X
RL: ANT (Analyte); ANST (Analytical study)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT 86-58-8, 8-Quinolineboronic acid 98437-23-1, 2-Benzothienylboronic acid 355386-94-6, 5-Quinolinylboronic acid 371764-64-6, 4-Quinolinylboronic acid 373384-17-9, 2-(4-Boronophenyl)-4-quinolinecarboxylic acid 590417-32-6, [6-(Dimethylamino)-2-naphthalenyl]-boronic acid

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

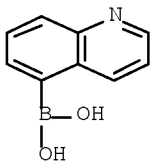
IT 636987-06-9P, 4-(Dimethylamino)naphthaleneboronic acid 847862-01-5P
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT 4766-33-0P, 5-Amino-1-bromonaphthalene 5328-76-7P, 5-Nitro-1-bromonaphthalene 10586-45-5P, 5-(Dimethylamino)-1-bromonaphthalene 61047-43-6P, 8-Bromo-2-methylquinoline 847861-96-5P 847861-97-6P 847861-98-7P 847861-99-8P 847862-00-4P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT 86-57-7, 1-Nitronaphthalene 121-43-7, Trimethylborate 615-36-1, 2-Bromoaniline 4170-30-3, Crotonaldehyde 24424-99-5 59557-93-6, 1-Bromo-4-(dimethylamino)naphthalene 201733-56-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

IT 355386-94-6, 5-Quinolinylboronic acid
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte detection by fluorometry with water soluble boronic acid fluorescent reporter compds.)

RN 355386-94-6 ZCAPLUS
CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

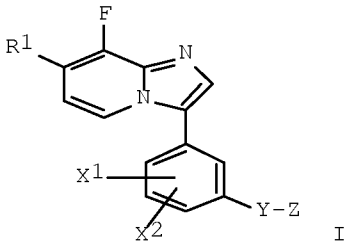
L14 ANSWER 45 OF 49 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:951023 ZCAPLUS Full-text
DOCUMENT NUMBER: 140:16738
TITLE: Preparation of 8-fluoro-3-phenylimidazo[1,2-a]pyridine derivatives as ligands for gamma-aminobutyric acid (GABA) receptors
INVENTOR(S): Goodacre, Simon Charles; Hallett, David James; Humphries, Alexander Charles; Jones, Philip; Kelly, Sarah M.; Merchant, Kevin John; Moore, Kevin William; Reader, Michael
PATENT ASSIGNEE(S): Merck Sharp & Dohme Limited, UK
SOURCE: PCT Int. Appl., 116 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003099816	A1	20031204	WO 2003-GB2236	20030523
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2486750	A1	20031204	CA 2003-2486750	20030523
AU 2003234022	A1	20031212	AU 2003-234022	20030523
EP 1511747	A1	20050309	EP 2003-727692	20030523
EP 1511747	B1	20060412		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005531582	T	20051020	JP 2004-507473	20030523
AT 323089	T	20060415	AT 2003-727692	20030523
ES 2260623	T3	20061101	ES 2003-727692	20030523
US 20050165048	A1	20050728	US 2004-512984	20041027
US 7279580	B2	20071009		

PRIORITY APPLN. INFO.: GB 2002-12048 A 20020524
WO 2003-GB2236 W 20030523

OTHER SOURCE(S): MARPAT 140:16738
GI



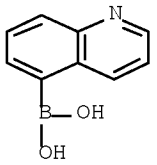
I

AB The title compds. [I; X1 represents hydrogen, halogen, C1-6 alkyl, trifluoromethyl, or C1-6 alkoxy; X2 represents hydrogen or halogen; Y represents a chemical bond, an oxygen atom, or a NH or OCH2 linkage; Z represents an optionally substituted aryl or heteroaryl group, or a pyrrolidinonyl group; R1 represents hydrogen, hydrocarbon, a heterocyclic group, halogen, cyano, trifluoromethyl, nitro, ORa, SRa, SORa, SO2Ra, SO2NRaRb, NRaRb, NRaCORb, NRaCO2Rb, CORa, CO2Ra, CONRaRb, or CRa-NORb; and Ra and Rb independently represent hydrogen, hydrocarbon or a heterocyclic group] are prepared These compds. are selective ligands for GABAA receptors, in particular having high affinity for the α2 and/or α3 and/or α5 subunit thereof

and accordingly of benefit in the treatment and/or prevention of neurol. disorders and adverse conditions of the central nervous system, including anxiety, convulsions and cognitive disorders. They were found to possess a Ki value for displacement of [3H]-flumazenil from the α2 and/or α3 and/or α5 subunit of the human GABAA receptor of 100 nM or less.

IT 355386-94-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; preparation of fluorophenylimidazo[a]pyridine derivs. as ligands for GABA receptors)

RN 355386-94-6 ZCAPLUS
CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)



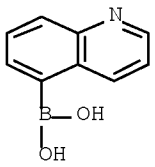
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 46 OF 49 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:178427 ZCAPLUS Full-text
DOCUMENT NUMBER: 138:338121
TITLE: New Synthesis of 1,3-Dihydro-1,4-benzodiazepin-2(2H)-ones and 3-Amino-1,3-dihydro-1,4-benzodiazepin-2(2H)-ones: Pd-Catalyzed Cross-Coupling of Imidoyl Chlorides with Organoboronic Acids
AUTHOR(S): Nadin, Alan; Sanchez Lopez, Jose M.; Owens, Andrew P.; Howells, Dean M.; Talbot, Adam C.; Harrison, Timothy
CORPORATE SOURCE: Neuroscience Research Centre, Department of Medicinal Chemistry, Merck, Sharp Dohme Research Laboratories, Harlow, Essex, CM20 2QR, UK
SOURCE: Journal of Organic Chemistry (2003), 68(7), 2844-2852 CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:338121

AB A wide variety of functionalized 1,4-benzodiazepines and 3-amino-1,4-benzodiazepines was synthesized via the Pd-catalyzed cross-coupling reaction of an imidoyl chloride with an organometallic reagent as the key step.

IT 355386-94-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of functionalized dihydrobenzodiazepinones via Pd-catalyzed cross-coupling of imidoyl chlorides with organoboronic acids, amines, or organometallic reagents)

RN 355386-94-6 ZCAPLUS
CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)

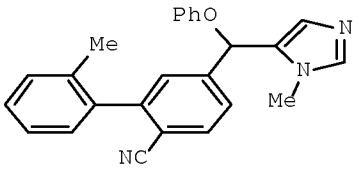


REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 47 OF 49 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:123617 ZCAPLUS Full-text
DOCUMENT NUMBER: 136:183819
TITLE: Preparation of (imidazolylalkyl)biphenylcarbonitriles and analogs as farnesyltransferase inhibitors
INVENTOR(S): Wang, Wei-Bo; Curtin, Michael L.; Fakhoury, Stephen A.; Gwaltney, Stephen L.; Hasvold, Lisa A.; Hutchins, Charles W.; Li, Qun; Lin, Nan-Horng; Nelson, Lissa Taka Jennings; O'Connor, Steve; Sham, Hing L.; Sullivan, Gerard M.; Wang, Gary T.; Wang, Xilu
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 189 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 20020019527	A1	20020214	US 2001-842391		20010425
PRIORITY APPLN. INFO.:			US 2000-200165P	P	20000427

OTHER SOURCE(S): MARPAT 136:183819
GI

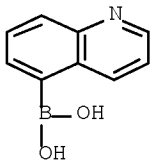


II

AB Title compds. (I) were prepared Thus, 2-MeC6H4C6H3(CN)(CHO)-2,5 was condensed with 1-methyl-2-triethylsilyl-1H-imidazole (preparation each given) and the product O-arylated to give title compound II. Data for biol. activity of I were given.

IT 355386-94-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of (imidazolylalkyl)biphenylcarbonitriles and analogs as farnesyltransferase inhibitors)

RN 355386-94-6 ZCAPLUS
CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)

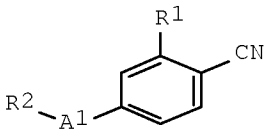


L14 ANSWER 48 OF 49 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:798200 ZCAPLUS Full-text
DOCUMENT NUMBER: 135:344482
TITLE: Preparation of substituted 4-(heteroarylmethyl)benzonitriles as farnesyltransferase inhibitors
INVENTOR(S): Wang, Wei-Bo; Curtin, Michael L.; Fakhoury, Stephen A.; Gwaltney, Stephen L., II; Hasvold, Lisa A.; Hutchins, Charles W.; Li, Qui; Lin, Nan-Horng; Jennings Nelson, Lissa Taka; O'Connor, Stephen J.; Sham, Hing L.; Sullivan, Gerald M.; Wang, Gary T.; Wang, Xilu
PATENT ASSIGNEE(S): Abbott Laboratories, USA
SOURCE: PCT Int. Appl., 305 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

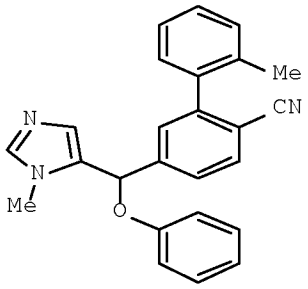
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001081316	A2	20011101	WO 2001-US13678	20010425
WO 2001081316	A3	20020523		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2407093	A1	20011101	CA 2001-2407093	20010425
EP 1276726	A2	20030122	EP 2001-932712	20010425
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004509064	T	20040325	JP 2001-578410	20010425
MX 2002010608	A	20030514	MX 2002-10608	20021025

PRIORITY APPLN. INFO.:	US 2000-563256	A	20000427
	US 2001-822205	A	20010402
	WO 2001-US13678	W	20010425

OTHER SOURCE(S): MARPAT 135:344482
GI



I



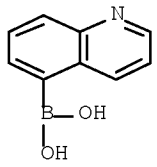
II

AB The title compds. [I; A1 = (un)substituted alkylene, etc.; R1 = halo, cycloalkyl, aryl, heteroaryl; R2 = heteroaryl selected from imidazolyl, pyrazolyl, pyrrolyl, etc.] and their pharmaceutically acceptable salts which farnesyltransferase, were prepared E.g., 3-step synthesis of the benzonitrile II.HCl which 88% inhibition of farnesyltransferase at 10-6 M, was given.

IT 355386-94-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of substituted 4-(heteroarylmethyl)benzonitriles as farnesyltransferase inhibitors)

RN 355386-94-6 ZCAPLUS

CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 49 OF 49 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:618000 ZCAPLUS Full-text

DOCUMENT NUMBER: 135:180708

TITLE: Preparation and formulation of biarylcarboxamides as nicotinic acetylcholine receptor agonists for therapeutic use in the treatment or prophylaxis of psychotic and intellectual impairment disorders

INVENTOR(S): Phillips, Eifion; Schmiesing, Richard

PATENT ASSIGNEE(S): Astrazeneca Ab, Swed.

SOURCE: PCT Int. Appl., 84 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

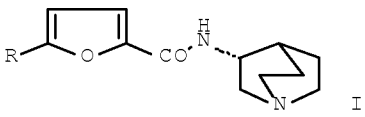
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001060821	A1	20010823	WO 2001-SE329	20010215
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2397233	A1	20010823	CA 2001-2397233	20010215
EP 1259508	A1	20021127	EP 2001-904770	20010215
EP 1259508	B1	20031015		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001008456	A	20030401	BR 2001-8456	20010215
JP 2003523342	T	20030805	JP 2001-560205	20010215
JP 4084570	B2	20080430		
HU 2003001069	A2	20030828	HU 2003-1069	20010215
HU 2003001069	A3	20040928		
AT 252099	T	20031115	AT 2001-904770	20010215
EE 200200459	A	20031215	EE 2002-459	20010215
PT 1259508	T	20040331	PT 2001-904770	20010215
ES 2208556	T3	20040616	ES 2001-904770	20010215
NZ 520094	A	20050128	NZ 2001-520094	20010215
AU 782693	B2	20050818	AU 2001-32594	20010215
RU 2263114	C2	20051027	RU 2002-118302	20010215
CN 100345847	C	20071031	CN 2001-804936	20010215
US 20030008867	A1	20030109	US 2002-123856	20020415
US 7001914	B2	20060221		
IN 2002MN00904	A	20040417	IN 2002-MN904	20020704
ZA 2002005479	A	20031009	ZA 2002-5479	20020709
BG 106977	A	20030530	BG 2002-106977	20020802
MX 2002007543	A	20021213	MX 2002-7543	20020805
NO 2002003917	A	20020916	NO 2002-3917	20020816
KR 769394	B1	20071022	KR 2002-710731	20020817
HK 1050007	A1	20040206	HK 2003-102250	20030328
IN 2005MN01124	A	20070525	IN 2005-MN1124	20051013
US 20060128749	A1	20060615	US 2006-325787	20060105
US 7214688	B2	20070508		
US 20070149563	A1	20070628	US 2007-680930	20070301
US 7491734	B2	20090217		

PRIORITY APPLN. INFO.:	SE 2000-540	A	20000218
	WO 2001-SE329	W	20010215
	US 2002-123856	A3	20020415
	IN 2002-MN904	A3	20020704
	US 2006-325787	A3	20060105

OTHER SOURCE(S): MARPAT 135:180708
GI



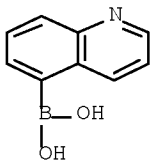
I

AB Biarylcarboxamides, such as A-NH-C(:X)-Ar1-Ar2 {A = 1-azabicyclo[2.2.2]octan-3-yl, 1-azabicyclo[2.2.1]heptan-3-yl, 7-azabicyclo[2.2.1]heptan-2-yl, 2-azabicyclo[2.2.2]octan-4-yl; Ar1, Ar2 = aryl, heteroaryl, substituted aryl, substituted heteroaryl; X = O, S}, were prepared for pharmaceutical use as nicotinic acetylcholine receptor agonists for treatment or prophylaxis of psychotic and intellectual impairment disorders. Thus, biarylcarboxamide I (R = Ph) was prepared via aromatic coupling of the hydrochloride salt of the corresponding bromide I (R = Br) with phenylboronic acid using Pd(PPh3)4 and cesium carbonate in a mixt of 1,2-dimethoxyethane, ethanol, and water. The prepared biarylcarboxamides were assayed for binding affinity for the α7AChR and α4AChR nicotinic acetylcholine receptors. Pharmaceutical formulations for delivery of the biarylcarboxamides were also discussed.

IT 355386-94-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and formulation of biarylcarboxamides as nicotinic acetylcholine receptor agonists for therapeutic use in the treatment or prophylaxis of psychotic and intellectual impairment disorders)

RN 355386-94-6 ZCAPLUS

CN Boronic acid, B-5-quinolinyl- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> d his full

     (FILE 'HOME' ENTERED AT 15:17:09 ON 31 MAR 2009)

     FILE 'REGISTRY' ENTERED AT 15:17:28 ON 31 MAR 2009
L1             STRUCTURE UPLOADED
L2           1 SEA SSS SAM L1
               D SCA

     FILE 'ZCAPLUS' ENTERED AT 15:19:04 ON 31 MAR 2009

     FILE 'STNGUIDE' ENTERED AT 15:19:37 ON 31 MAR 2009

     FILE 'ZCAPLUS' ENTERED AT 15:19:47 ON 31 MAR 2009
               E US2007-570807 /APPS
L3           1 SEA SPE=ON  ABB=ON  PLU=ON  US2007-570807 /AP
               D SCA
               SEL RN

     FILE 'REGISTRY' ENTERED AT 15:20:09 ON 31 MAR 2009
L4          37 SEA SPE=ON  ABB=ON  PLU=ON  (10586-45-5/BI OR 121-43-7/BI OR
               147-81-9/BI OR 17598-81-1/BI OR 201733-56-4/BI OR 2438-80-4/BI
               OR 24424-99-5/BI OR 3458-28-4/BI OR 355386-94-6/BI OR 371764-64
               -6/BI OR 373384-17-9/BI OR 4170-30-3/BI OR 4766-33-0/BI OR
               50-70-4/BI OR 50-99-7/BI OR 5328-76-7/BI OR 57-48-7/BI OR
               59-23-4/BI OR 590417-32-6/BI OR 59557-93-6/BI OR 61047-43-6/BI
               OR 615-36-1/BI OR 63-42-3/BI OR 636987-06-9/BI OR 71208-06-5/BI
                OR 82993-43-9/BI OR 847861-96-5/BI OR 847861-97-6/BI OR
               847861-98-7/BI OR 847861-99-8/BI OR 847862-00-4/BI OR 847862-01
               -5/BI OR 86-57-7/BI OR 86-58-8/BI OR 92448-22-1/BI OR 98437-23-
               1/BI OR 98603-84-0/BI)
L5          12 SEA SPE=ON  ABB=ON  PLU=ON  L4 AND B/ELS
               D SCA
L6           5 SEA SSS FUL L1
               D SCA
               SAVE TEMP L6 CHA807STR1L/A

     FILE 'ZCAPLUS' ENTERED AT 15:22:19 ON 31 MAR 2009
L7         143 SEA SPE=ON  ABB=ON  PLU=ON  L6
L8             ANALYZE PLU=ON  L7 1- RN HIT :       5 TERMS
               D

     FILE 'REGISTRY' ENTERED AT 15:24:12 ON 31 MAR 2009
L9           1 SEA SPE=ON  ABB=ON  PLU=ON  86-58-8
               D SCA
L10          1 SEA SPE=ON  ABB=ON  PLU=ON  355386-94-6
               D SCA

     FILE 'ZCAPLUS' ENTERED AT 15:31:01 ON 31 MAR 2009

     FILE 'REGISTRY' ENTERED AT 15:31:10 ON 31 MAR 2009
L11          3 SEA SPE=ON  ABB=ON  PLU=ON  L6 NOT (L9 OR L10)

     FILE 'ZCAPLUS' ENTERED AT 15:31:21 ON 31 MAR 2009
L12          5 SEA SPE=ON  ABB=ON  PLU=ON  L11
L13        106 SEA SPE=ON  ABB=ON  PLU=ON  L9
L14         49 SEA SPE=ON  ABB=ON  PLU=ON  L10
L15         22 SEA SPE=ON  ABB=ON  PLU=ON  L13 AND AY<2003
```

```
L16           4 SEA SPE=ON  ABB=ON  PLU=ON  L14 AND AY<2003
L17           0 SEA SPE=ON  ABB=ON  PLU=ON  L12 AND AY<2003
L18          31 SEA SPE=ON  ABB=ON  PLU=ON  L13 AND AY<2004
L19           6 SEA SPE=ON  ABB=ON  PLU=ON  L14 AND AY<2004
L20           0 SEA SPE=ON  ABB=ON  PLU=ON  L12 AND AY<2004
L21          42 SEA SPE=ON  ABB=ON  PLU=ON  L13 AND PRY<2004
L22          37 SEA SPE=ON  ABB=ON  PLU=ON  L13 AND PY<2004
L23          52 SEA SPE=ON  ABB=ON  PLU=ON  L18 OR L21 OR L22
L24      598735 SEA SPE=ON  ABB=ON  PLU=ON  ?FLUORESC?/BI
L25           5 SEA SPE=ON  ABB=ON  PLU=ON  L24 AND L13
L26           2 SEA SPE=ON  ABB=ON  PLU=ON  L25 AND PY<2004
L27           2 SEA SPE=ON  ABB=ON  PLU=ON  L25 AND PRY<2004
L28           0 SEA SPE=ON  ABB=ON  PLU=ON  L25 AND AY<2004
L29           4 SEA SPE=ON  ABB=ON  PLU=ON  (L26 OR L27 OR L28)
                D BIB 1
                D BIB 4
L30           3 SEA SPE=ON  ABB=ON  PLU=ON  L14 AND L24
L31           0 SEA SPE=ON  ABB=ON  PLU=ON  L30 AND PY<2004
L32           1 SEA SPE=ON  ABB=ON  PLU=ON  L30 AND PRY<2004
L33           0 SEA SPE=ON  ABB=ON  PLU=ON  L30 AND AY<2004
L34           1 SEA SPE=ON  ABB=ON  PLU=ON  (L31 OR L32 OR L33)
                D BIB
L35       18168 SEA SPE=ON  ABB=ON  PLU=ON  WANG B?/AU
L36        8823 SEA SPE=ON  ABB=ON  PLU=ON  GAO X?/AU
L37       14705 SEA SPE=ON  ABB=ON  PLU=ON  YANG W?/AU
L38        3780 SEA SPE=ON  ABB=ON  PLU=ON  FANG H?/AU
L39        7303 SEA SPE=ON  ABB=ON  PLU=ON  YAN Y?/AU
L40         273 SEA SPE=ON  ABB=ON  PLU=ON  L35 AND (L36 OR L37 OR L38 OR L39)

L41          65 SEA SPE=ON  ABB=ON  PLU=ON  L36 AND (L37 OR L38 OR L39)
L42          36 SEA SPE=ON  ABB=ON  PLU=ON  L37 AND (L38 OR L39)
L43          11 SEA SPE=ON  ABB=ON  PLU=ON  L38 AND L39
L44          15 SEA SPE=ON  ABB=ON  PLU=ON  L40 AND (L41 OR L42 OR L43)
L45           1 SEA SPE=ON  ABB=ON  PLU=ON  L41 AND (L42 OR L43)
L46           0 SEA SPE=ON  ABB=ON  PLU=ON  L42 AND L43
L47          15 SEA SPE=ON  ABB=ON  PLU=ON  (L44 OR L45 OR L46)
L48           8 SEA SPE=ON  ABB=ON  PLU=ON  L7 AND (L35 OR L36 OR L37 OR L38
                OR L39)
L49          22 SEA SPE=ON  ABB=ON  PLU=ON  (L47 OR L48)

     FILE 'MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 15:45:38 ON 31 MAR 2009
L50          19 SEA SPE=ON  ABB=ON  PLU=ON  L47

     FILE 'REGISTRY' ENTERED AT 15:46:02 ON 31 MAR 2009

     FILE 'ZCAPLUS' ENTERED AT 15:46:06 ON 31 MAR 2009
                D STAT QUE L47

     FILE 'MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 15:46:18 ON 31 MAR 2009

     FILE 'ZCAPLUS' ENTERED AT 15:46:31 ON 31 MAR 2009
                D STAT QUE L48
L51          22 SEA SPE=ON  ABB=ON  PLU=ON  L47 OR L48

     FILE 'MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 15:46:48 ON 31 MAR 2009
                D STAT QUE L50

     FILE 'ZCAPLUS, MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 15:47:14 ON 31
     MAR 2009
L52          24 DUP REM L51 L50 (17 DUPLICATES REMOVED)
```

```
                ANSWERS '1-22' FROM FILE ZCAPLUS
                ANSWERS '23-24' FROM FILE BIOSIS
           D IBIB ABS HITSTR L52 1-22
           D IALL L52 23-24

FILE 'REGISTRY' ENTERED AT 15:48:20 ON 31 MAR 2009

FILE 'ZCAPLUS' ENTERED AT 15:48:24 ON 31 MAR 2009
           D STAT QUE L12
           D IBIB ABS HITSTR L12 1-5

FILE 'REGISTRY' ENTERED AT 15:49:15 ON 31 MAR 2009

FILE 'ZCAPLUS' ENTERED AT 15:49:24 ON 31 MAR 2009
           D STAT QUE L29
           D STAT QUE L13
           D IBIB ABS HITIND HITSTR L29 1-4
           D IBIB ABS HITSTR L13 102-106

FILE 'REGISTRY' ENTERED AT 15:50:33 ON 31 MAR 2009

FILE 'ZCAPLUS' ENTERED AT 15:50:36 ON 31 MAR 2009
           D STAT QUE L34
           D STAT QUE L14
           D IBIB ABS HITIND HITSTR L34 1
           D IBIB ABS HITSTR L14 45-49


FILE HOME

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   29 MAR 2009  HIGHEST RN 1129300-01-1
DICTIONARY FILE UPDATES:  29 MAR 2009  HIGHEST RN 1129300-01-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

FILE ZCAPLUS

Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
```

of this information, without the prior written consent of CAS is strictly prohibited.

FILE COVERS 1907 - 31 Mar 2009 VOL 150 ISS 14
FILE LAST UPDATED: 30 Mar 2009 (20090330/ED)

ZCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE STNGUIDE
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Mar 27, 2009 (20090327/UP).

FILE MEDLINE
FILE LAST UPDATED: 28 Mar 2009 (20090328/UP). FILE COVERS 1949 TO DATE.

MEDLINE and LMEDLINE have been updated with the 2009 Medical Subject Headings (MeSH) vocabulary and tree numbers from the U.S. National Libra of Medicine (NLM). Additional information is available at

http://www.nlm.nih.gov/pubs/techbull/nd08/nd08_medline_data_changes_2009.

On February 21, 2009, MEDLINE was reloaded. See HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

See HELP RANGE before carrying out any RANGE search.

FILE EMBASE
FILE COVERS 1974 TO 31 Mar 2009 (20090331/ED)

EMBASE was reloaded on March 30, 2008.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

Beginning January 2008, Elsevier will no longer provide EMTREE codes as part of the EMTREE thesaurus in EMBASE. Please update your current-awareness alerts (SDIs) if they contain EMTREE codes.

For further assistance, please contact your local helpdesk.

FILE BIOSIS
FILE COVERS 1926 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1926 TO DATE.

RECORDS LAST ADDED: 25 March 2009 (20090325/ED)

BIOSIS has been augmented with 1.8 million archival records from 1926 through 1968. These records have been re-indexed to match current BIOSIS indexing.

FILE WPIX
FILE LAST UPDATED: 23 MAR 2009 <20090323/UP>
MOST RECENT UPDATE: 200918 <200918/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE
>>> Now containing more than 1.3 million chemical structures in DCR <<<

>>> IPC and US National Classifications have been updated with reclassifications to the end of 2008.
ECLA, F-Term and FI-Term classifications are complete to the end of 2008.
No update date (UP) has been created for the reclassified documents, but they can be identified by specific update codes (see HELP CLA for details)<<<

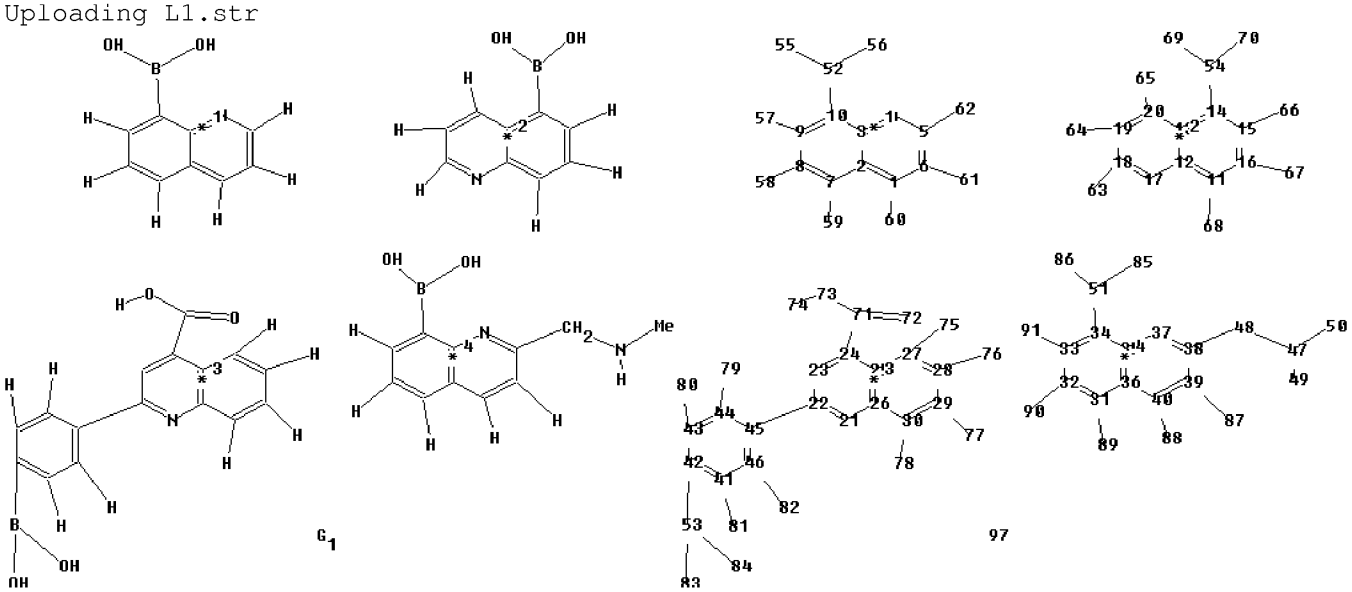
FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE, PLEASE VISIT:
http://www.stn-international.com/stn_guide.html

FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomsonreuters.com/support/patents/coverage/latestupdate

EXPLORE DERWENT WORLD PATENTS INDEX IN STN ANAVIST, VERSION 2.0:
http://www.stn-international.com/DWPIAnaVist2_0608.html

>>> HELP for European Patent Classifications see HELP ECLA, HELP ICO <<<

Uploading L1.str



chain nodes :
47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67
68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88
89 90 91
97
ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44
45 46
chain bonds :
1-60 5-62 6-61 7-59 8-58 9-57 10-52 11-68 14-54 15-66 16-67 18-63 19-64
20-65 22-45 24-71 27-75 28-76 29-77 30-78 31-89 32-90 33-91 34-51 38-48
39-87 40-88
41-81 42-53 43-80 44-79 46-82 47-48 47-49 47-50 51-85 51-86 52-55 52-56
53-83 53-84
54-69 54-70 71-72 71-73 73-74
ring bonds :
1-2 1-6 2-3 2-7 3-4 3-10 4-5 5-6 7-8 8-9 9-10 11-12 11-16 12-13 12-17
13-14 13-20 14-15 15-16 17-18 18-19 19-20 21-22 21-26 22-23 23-24 24-25
25-26 25-27
26-30 27-28 28-29 29-30 31-32 31-36 32-33 33-34 34-35 35-36 35-37 36-40
37-38 38-39
39-40 41-42 41-46 42-43 43-44 44-45 45-46
exact bonds :
1-60 5-62 6-61 7-59 8-58 9-57 10-52 11-68 14-54 15-66 16-67 18-63 19-64
20-65 22-45 24-71 27-75 28-76 29-77 30-78 31-89 32-90 33-91 34-51 38-48
39-87 40-88
41-81 42-53 43-80 44-79 46-82 47-48 47-49 47-50 51-85 51-86 52-55 52-56
53-83 53-84
54-69 54-70 73-74
normalized bonds :
1-2 1-6 2-3 2-7 3-4 3-10 4-5 5-6 7-8 8-9 9-10 11-12 11-16 12-13 12-17
13-14 13-20 14-15 15-16 17-18 18-19 19-20 21-22 21-26 22-23 23-24 24-25
25-26 25-27
26-30 27-28 28-29 29-30 31-32 31-36 32-33 33-34 34-35 35-36 35-37 36-40
37-38 38-39
39-40 41-42 41-46 42-43 43-44 44-45 45-46 71-72 71-73

G1:[*1],[*2],[*3],[*4]

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom
22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom
31:Atom 32:Atom
33:Atom 34:Atom 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 40:Atom 41:Atom
42:Atom 43:Atom
44:Atom 45:Atom 46:Atom 47:CLASS 48:CLASS 49:CLASS 50:CLASS 51:CLASS
52:CLASS 53:CLASS 54:CLASS
55:CLASS 56:CLASS 57:CLASS 58:CLASS 59:CLASS 60:CLASS 61:CLASS 62:CLASS
63:CLASS 64:CLASS
65:CLASS 66:CLASS 67:CLASS 68:CLASS 69:CLASS 70:CLASS 71:CLASS 72:CLASS
73:CLASS
74:CLASS 75:CLASS 76:CLASS 77:CLASS 78:CLASS 79:CLASS 80:CLASS 81:CLASS
82:CLASS 83:CLASS
84:CLASS 85:CLASS 86:CLASS 87:CLASS 88:CLASS 89:CLASS 90:CLASS 91:CLASS
97:CLASS

=>